Psiber Data

WireXpert

For Fiber Testing

User Manual

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WX Series (WX4500)

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CAUTION

A **CAUTION** notice denotes a hazard.

It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING

Operating procedure, practice, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

General Safety Information

WARNING

Do not use the device if it is damaged. Before you use the device, inspect the casing. Look for cracks or missing plastic. Do not operate the device around explosive gas, vapor, or dust.

Always use the device with the cables provided.

Observe all markings on the device before establishing any connection.

Turn off the device and application system power before connecting to the I/O terminals.

When servicing the device, use only the specified replacement parts.

Do not operate the device with the cover removed or loosened.

Use only the power adapter provided by the manufacturer to avoid any unexpected hazards.

CAUTION

If the device is used in a manner not specified by the manufacturer, the device protection may be impaired.

Always use dry cloth to clean the device. Do not use ethyl alcohol or any other volatile liquid to clean the device.

Do not permit any blockage of the ventilation holes of the device.

Environmental Conditions

This instrument is designed for indoor use and in an area with low condensation. The table below shows the general environmental requirements for this instrument

Environmental conditions	Requirements
Operating Temperature	0 °C to 50 °C
Operating humidity	20% to 85% RH non-condensing
Storage temperature	20 °C to 70 °C
Storage humidity	5% to 90% RH non-condensing

NOTE

The WX4500, WX500 complies with the following Safety and Regulatory requirements.

DIN EN 55024, Edition:2003-10 (IEC/CISPR 24:1997, modified + A1:2001 + A2:2002); EN 55024:1998 + A1:2001 + A2:2003
DIN EN 55022; VDE 0878-22:2008-05 (IEC/CISPR 22:2005, modified + A1:2005); EN 55022:2006 + A1:2007

Regulatory Markings

CE	The CE mark is a registered trademark of the European Community. This CE mark shows that the product complies with all the relevant European Legal Directives.

Declaration of Conformity

CE

Manufacturer's Name	Psiber Data Pte. Ltd
Manufacturer's Address	3 Science Park Drive #03-08, The Franklin Singapore Science Park 1, Singapore 118223

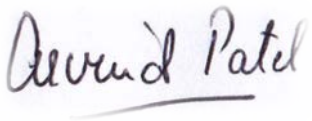
Declares under sole responsibility that the product as originally delivered

Model Number	WireXpert, **WX4500-FA, WX500**
Description	Class FA Copper Certification Kit
Equipment	Cable Certifier

Complies with the essential requirements of the following applicable European Directives and carries the CE marking accordingly:

DIN EN 55024, Edition:2003-10 (IEC/CISPR 24:1997, modified + A1:2001 + A2:2002); EN 55024:1998 + A1:2001 + A2:2003

DIN EN 55022;
VDE 0878-22:2008-05 (IEC/CISPR 22:2005, modified + A1:2005);
EN 55022:2006 + A1:2007



Signature

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Date : December 14, 2010

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Chapter 1: Getting Started

Unpacking the kits

Single Mode Fiber (WX_AD_SM_KIT)

Single Mode Adapters (WX_AD_SM)

Single Mode Duplex Cords (WX_AC_SM_CORD_SCSC)
SC Connector (WX_AC_CONNECTOR_SCSC)

SC Cleaning Kit (WX_AC_CKIT_SC)

Multi Mode Fiber (WX_AD_MM_KIT)

Multi Mode Adapters (WX_AD_MM)

Multi Mode Duplex Cords (WX_AC_MM_CORD_SCSC)
Mandrels (WX_AC_MM_MANDREL)
SC Connector (WX_AC_CONNECTOR_SCSC)

SC Cleaning Kit (WX_AC_CKIT_SC)

Encircled Flux Compliant Multi Mode Fiber (WX_AD_MMEF_KIT)

Multi Mode Adapters (WX_AD_MMEF)

MMEF Reference Cords (WX_AC_MMEF_CORD_FCSC)
MMEF Tail Cords (WX_AC_MMEF_CORD_SCSC)
SC Connector (WX_AC_CONNECTOR_SCSC)

SC Cleaning Kit (WX_AC_CKIT_SC)

Optional LC Cord Kit (WX_AD_MMEF_CORD_KIT_LC) available.

Multi-fiber Push On (WX_AD_MPO_KIT)

MPO Light Source Adapter (WX_AD_MPO_LS)
MPO Power Meter Adapter (WX_AD_MPO_PM)

MPO Type A Tail Cords (WX_AC_MPO_CORD_AUP)
MPO Type A Reference Cord (WX_AC_MPO_CORD_AUU)
MPO Type B Reference Cord (WX_AC_MPO_CORD_BUU)
Type A Connector (WX_AC_CONNECTOR_SCSC)

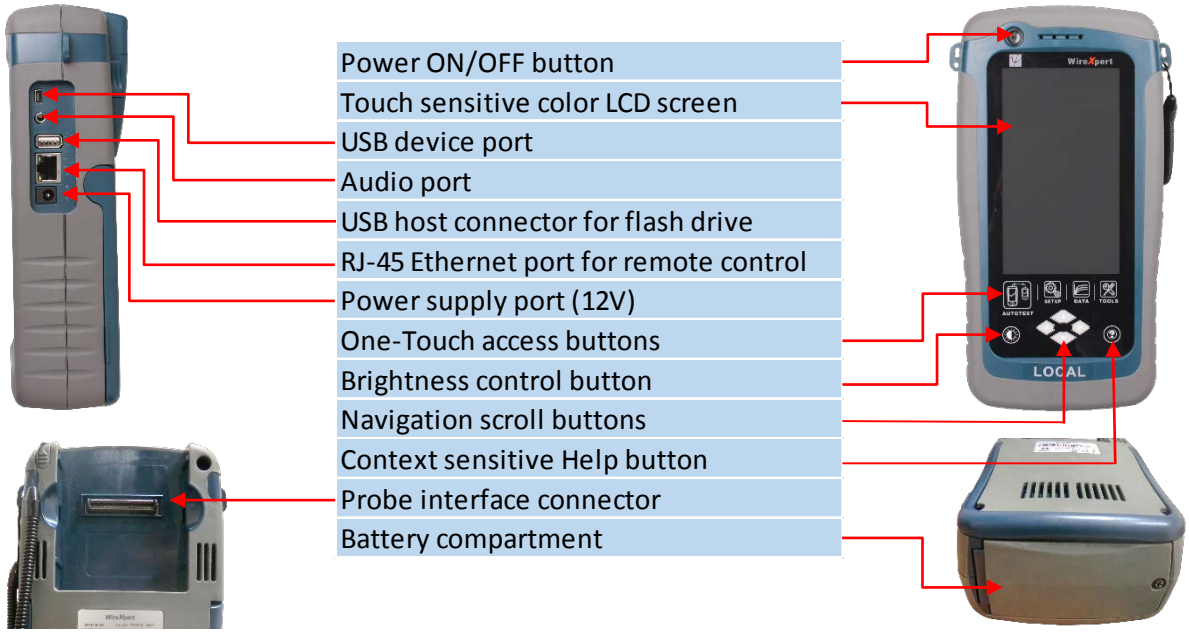
MPO Cleaning Kit (WX_AC_CKIT_MPO)

Optional EF Compliant Kit (WX_AD_MPOEF_KIT) available.

Key differences between WX4500 and WX500

Feature	WX4500	WX500
Frequency of measurement	2500 MHz	500 MHz
Accuracy Specification	Level V+ (Level 2G …)	Level IV
Fiber Testing option	Yes	No
Class FA/CAT 8 options	Yes	No
Patch Cord Test adapters	Yes	No

WireXpert Overview



Item	Functionality
Power ON/OFF Button	Powers on or shuts down the device. Press and hold for 5 seconds to power on device. Press and hold for 2 seconds to shut down device. Turns red when charging.
Touch Sensitive LCD screen	Performs test executions and viewing of results.
USB device port	Enables remote connection to the PC for firmware update and exporting saved results.
Audio port	Enables vocal communication between Local and Remote units when connected to talkset headphones (WX_AC_TALKSET).
USB Host port	Enables results to be exported and firmware upgrade via USB flash drive. Enables loading of custom limits and labels for list based testing.
RJ-45 Ethernet port	Enables communication between two sets of WireXpert for Alien Crosstalk testing.
Power Supply port	Performs charging of device when connected to power adapter shipped with WireXpert.
One-touch access buttons	Main functional buttons for WireXpert. Enables quick autotest and results viewing in a single click.
Brightness Control	Adjusts the brightness level of the LCD display.
Navigation scroll buttons	Performs navigation in long lists.
Context sensitive help	Provides simple explanation relevant to the functionality on the current screen.

Probe interface connector	When connected with different probe adapters (e.g. CAT6A channel or Permanent Link), WireXpert will enable specified certification test to be conducted.
Battery compartment	Battery storage compartment. Unscrew to replace battery (WX_AC_BATT).

WireXpert Kits

The following kits can be ordered to perform more certification tests using WireXpert.

Product Number	Name	Description
WX_AD_6ACH_KIT WX_AD_6APL_KIT	Copper Certification Kit	Certification kit for testing channel or permanent link connections up to Cat6A.
WX_AD_FACH_TERA_KIT WX_AD_FAPL_TERA_KIT	Class FA Certification Kit	Certification kit for testing channel or permanent link connections for Class FA in TERA connector. Also available in GG45 connector.
WX_AD_M12CH_4_KIT WX_AD_M12XCH_8_KIT	Industrial Ethernet Certification Kit	Certification kit for testing industrial Ethernet M12 or M12 X-coded channel connections.
WX_AD_VNA_KIT	Laboratory Setup Certification Kit	Certification kit for vector network analysing.
WX_AD_SM_KIT	Single Mode Fiber Certification Kit	Certification kit for testing 1310nm and 1550nm single mode fiber SC links. Also available in LC links.
WX_AD_MM_KIT_VCL	Multi-Mode Fiber Certification Kit	Certification kit for testing 850nm and 1300nm VCSEL based multi-mode fiber SC links. Also available in LC links.
WX_AD_MMEF_KIT	Encircled Flux (EF) Compliant Multi-Mode Fiber Certification Kit	Certification kit for testing EF compliant 850nm and 1300nm multi-mode fiber FC links.
WX_AD_MPO_KIT	Multi-Fiber Push-On (MPO) Certification Kit	Certification kit for MPO testing.
WX_AD_MPOEF_KIT	Encircled Flux (EF) Compliant Multi-Fiber Push-On (MPO) Certification Kit	Certification kit for EF Compliant MPO testing.

Please contact Psiber Data for more comprehensive product offerings and catalogue.

Dual Control System (DCS)

WireXpert consists of two identical devices for dual-end testing and certification. Both devices utilise easy to use LCD touch-screen technology and graphical user interface. The DCS enables quick and real-time data retrieving on both ends, improving efficiency and productivity significantly.

WireXpert Adapters

All test adapters are designed to fit onto every WireXpert units. The device automatically detects adapters when connected and configures its interface to the matching parameters and limits.

Adapter Configuration Warnings

WireXpert will display a warning a potential conflict is detected between the adapter and the test settings. It is important to use the appropriate adapters as accuracy of measurements will be affected.

Cabling Certification and Tests

Certification testing with WireXpert is highly intuitive and simple. The autotest function performs a series of measurements between the Local and Remote devices and analyses the results to determine if the cabling run passes or fails the selected standards.

Fiber Optic Certification Testing

One of the most crucial step when installing a fiber optic network is testing the newly installed and terminated fiber optic cables, ensuring they are functioning properly.

The two basic categories in which typical indoor fiber optic cables are tested:

- Continuity – A good unbroken fiber cable is able to transmit the necessary data, i.e., a broken or imperfect fiber within a cable causing the far end to be not visibly lit, there will be interruption to data transmission. This can be tested using the Visual Fault Locator (VFL).
- End-to-End Optical Loss – Optical Loss is the difference between the emitting optical power that is sent into a cable's transmitting end, and the actual amount that is received at the far end. This can be tested using a Light Source and a Power Meter.

Single Mode and Multi-Mode

There are two main types of fiber optic cables- the Single Mode fiber (SMF) and the Multi-Mode fiber (MMF). The main difference is in the size of its core, with MMF having a wider 62.5 or 50 μm, allowing multiple modes (or "rays") of lights to propagate, and SMF having a narrow 9 μm, allowing only a single mode of light to propagate. They carry different properties, with its own advantages and disadvantages.

Parameters	**Single Mode**		**Multi Mode**	
Wavelength	1310nm	1550nm	850nm	1300nm
Distance	Up to 30km	Up to 60km	Up to 3km	Up to 10km
Attenuation	0.35dB/km	0.25dB/km	3.5dB/km	1.0dB/km
General Usage	Telecom & CATV Networks		LAN, security systems, general fiber networks	
Cost of Implementation	High		Low	

Encircled Flux (EF) Compliant

Certification of MMF has been a contentious issue to the inherent uncertainties in the measurement process. ISO/IEC and TIA have recently adopted an Encircled Flux (EF) standard to characterize launch conditions to ensure certification testing can be conducted with more accurate and repeatable results.

Multi-fiber Push On (MPO)

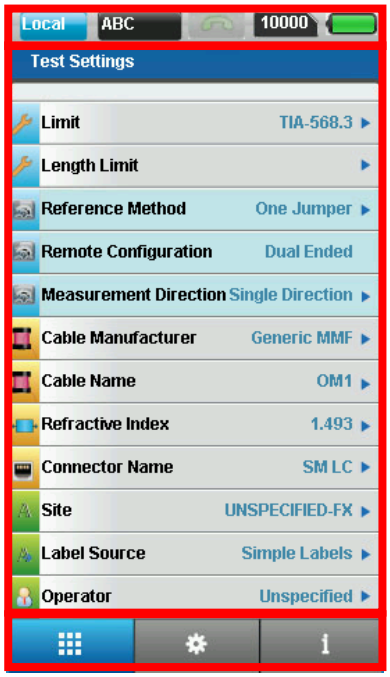
The need of bandwidth continues to rise, with next technologies such as 40GbE and 100GbE in line. Generally used in data centres, MPO provides higher density and bandwidth for 10G, 40G and 100G applications which minimizes space requirements, reduces air-flow congestion, improves cooling efficiency and reduces cost as compared to regular Single Mode (feasible for longer links) and Multi Mode (require parallel optical connections) fiber optics installations. Depending on requirements, different geometries (SMF, MMF 62.5μm, MMF 50μm –OM2, OM3 & OM4) and polarity management can be done with MPO.

WireXpert User Interface

Touch Screen Layout

The touch-screen interface of WireXpert can be divided into three groups.

1. The Information group at the top provides hardware information such as the device Information (Local/Remote), name, battery level, etc.
2. The Functionality group provides setting options necessary to conduct an AUTOTEST.
3. The Navigation sub-group provides functional settings in the functionality group.

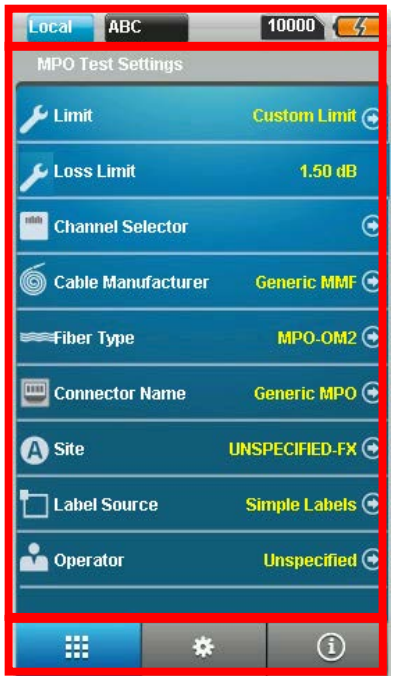


Test Setting screen for SMF, MMF and MMEF

Information Group

Functionality Group

Navigational Group



Test Setting screen for MPO

The One Touch Access Buttons

The fundamental philosophy behind the WireXpert User Interface is simplicity in its ease of use. The main functions of the One-Touch access buttons as follows:

AUTOTEST

The "**AUTOTEST"** button will perform an immediate certification test on the last configured settings. If no settings were configured, default settings will be used.

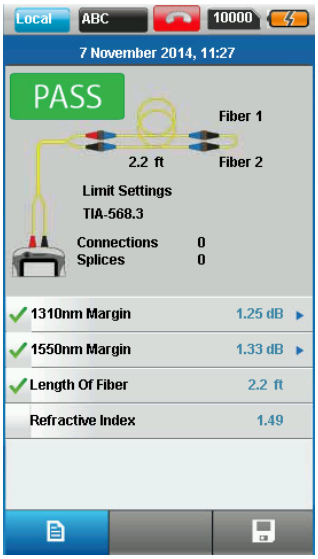
Test results will be generated automatically after the test is completed.

You will receive any of the following 3 results after the "AUTOTEST":

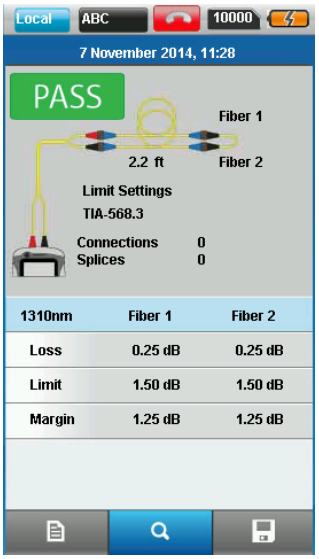
- Green "PASS" – Good test result in accordance to pre-defined settings
- Green "PASS*" – Marginal pass result with some disturbance. Acceptable results.
- Red "FAIL" – Unacceptable results with sever disturbance on one or more test parameters.
- Red "FAIL*" – unacceptable results with slight disturbance on one or more test parameters.

You will be given the option to "View" a more detailed result or "Cancel" test result. If "Detailed" test results is chosen, additional test parameters will be displayed and plot will be generated when parameter is chosen. If "Cancel" is chosen, you will be prompted to "Save" the test result or continue with "Cancel".

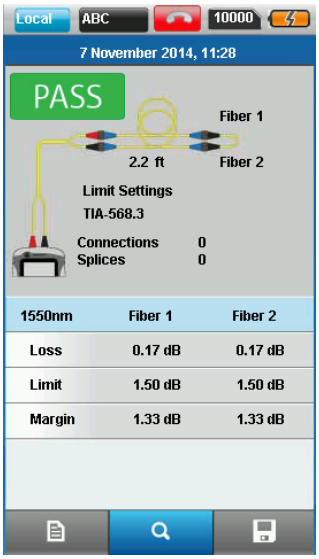
An "AUTOTEST" will fail in the event of missing connection at the near-end (Local) or far-end (Remote) or wrong settings configured.



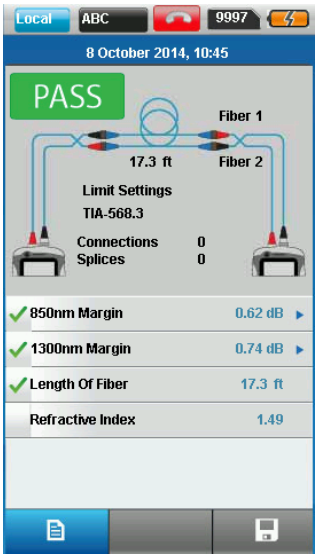
AUTOTEST results for Single ended SMF



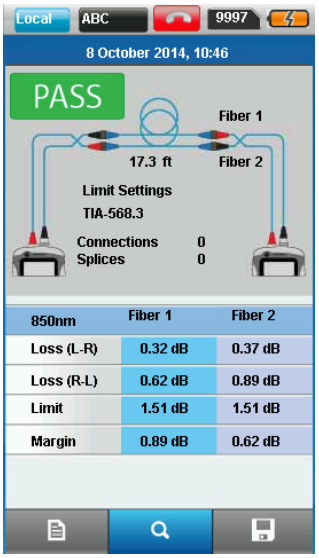
Detailed test result for 1310nm



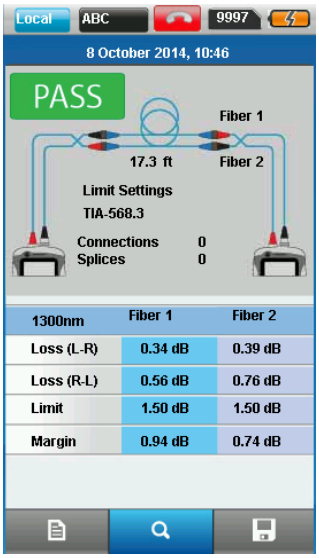
Detailed test result for 1550nm



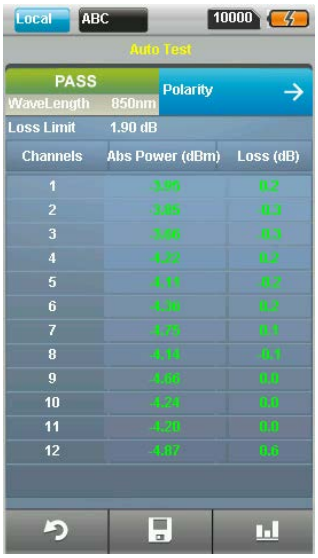
AUTOTEST results for Dual ended MMEF



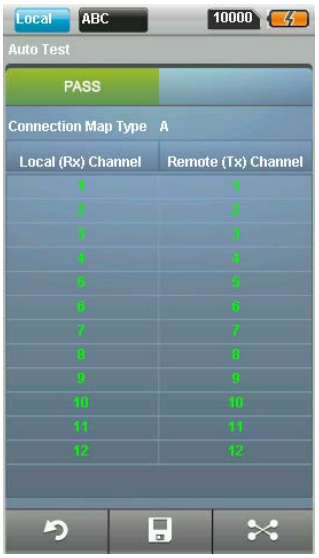
Detailed test result for 850nm



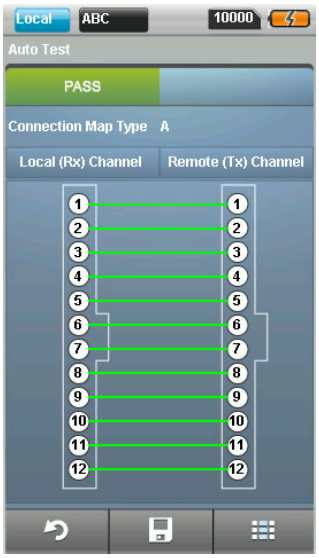
Detailed test result for 1300nm



AUTOTEST results for MPO using Type A OM3 cord



Polarity



Fiber map

The type of results will differ depending on the Test Limits and type of cable.

SETUP

The "**SETUP**" button provides setting options necessary to conduct an AUTOTEST. These options include –

Test Settings

- Limit – Choose from a list of standards to determine the performance criteria in a given category or class.

- Length Limit (SM/MM/MMEF only) – Determine the length of the fiber optic under test.
- Loss Limit (MPO only) – Displays the Loss Limit when Custom Limit is selected.
- Reference Method (SM/MM/MMEF only) – Choose 1, 2 or 3 jumper(s) on single ended loopback or dual ended configuration when Set Referencing is conducted.
- Remote Configuration (SM/MM/MMEF only) – Displays the selected Set Reference configuration.
- Measurement Direction (SM/MM/MMEF only) – Choose Single or Bi-directional measurements are taken when doing Autotest.
- Channel Selector (MPO only) – Choose which channel(s) to have Loss Limit included during Autotest calculations. Disabled channels will be Yellow on test results.
- Connector Manufacturer – Choose from a list of connector manufacturers for more specific test parameters. If unsure of manufacturer, choose “Generic SMF” or “Generic SMF“ for SM/MM/MMEF probes.
- Cable Name (SM/MM/MMEF only) – Select the cable from the selected manufacturer.
- Refractive Index (SM/MM/MMEF only) – Determines how fast light will be propagated.
- Connector Name – Choose from a list of connector names for more specific test parameters.
- Site – Create a new site for a new project or choose from a list of saved sites. Saved sites can be deleted on this option.
- Label Source – Choose from a list of cable labelling style.
- Operator – Create or choose the operator operating the device.

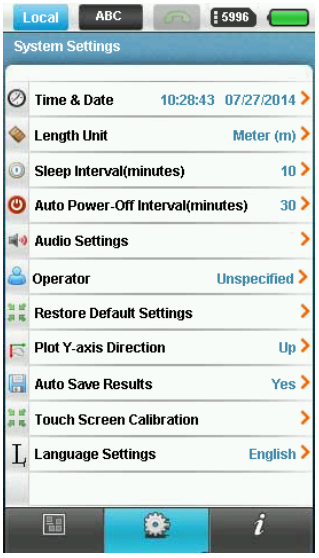
System Settings

- Time & Date – Determines how time and date will be displayed.
- Length Unit – Determines Meters (m) or Feet (ft) will be used as the default length unit displayed.
- Sleep Interval – Determines the inactivity period before the LCD enters sleep (power saving) mode.
- Auto Power-off Interval – Determines the inactivity before the device performs an auto shutdown.

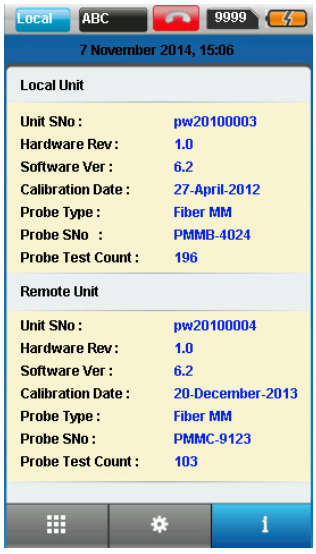
- Audio Settings – Determines the volume and sound option to the device.
- Operator – Determines the name of the operator to the device.
- Restore Default Settings – Erases all user defined settings and reloads default factory settings.
- Plot Y-axis Direction – Determines the presentation of the Y-axis on viewing detail test results.
- Auto Save Results – If enabled, WireXpert will automatically save all PASS test results with reference to the label source configured.
- Touch Screen Calibration – Performs touch calibration to the device.
- Language Settings – Determines the language used on the device.

Device Information

Displays device information such as device's and probe's serial number, firmware version, calibration date, probe type and probe test count.



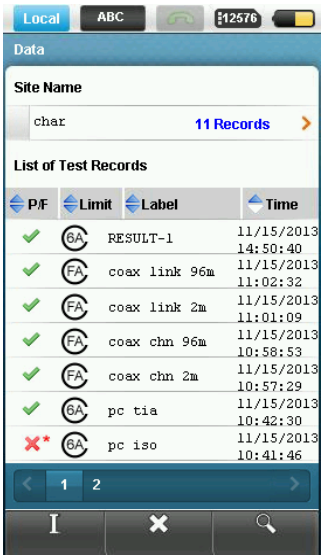
System Settings



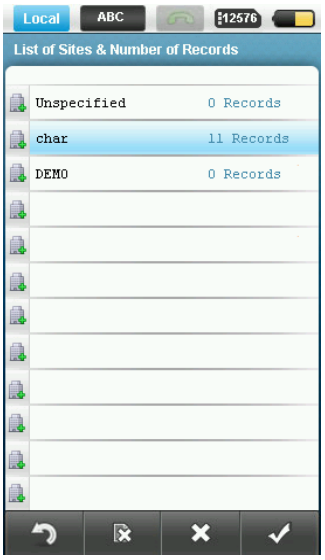
Device Information for SM/MM/MMEF

DATA

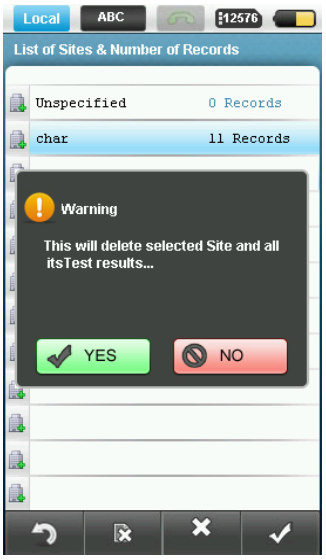
The "**DATA**" button provides archive and data management ability to saved sites and test results. Saved test results can be renamed or deleted in this option.



Saved test results



Saved Sites



Deleting of Sites

Note: Deleting a site will also delete its containing test results.

TOOLS

The "**TOOLS**" button provides advanced options for in-depth troubleshooting and expert WireXpert users. These options include-

Requires:
Local and Remote

Set Reference – Establish test conditions between reference cords and cord to be tested to ensure low insertion loss using Power Meter and Light Source.

Requires:
Local and Remote

Power Meter – Tests for loss when paired with a Light Source.
Available in Local unit only.

Requires:
Local and Remote
(SM/MM/MMEF Only)

Light Source – Emits light source to determine loss on a Power Meter.
Available in "Fiber Mode" only.

Requires:
Local and Remote
(SM/MM/MMEF Only)

MPO/MTP – Switches device to MPO mode to perform single fiber Power Meter test.

Requires:
Local or Remote
(MMEF Only)

VFL – Visual Fault Locator. Emits light for visual detection of broken fiber location.

Requires:
Local or Remote
Fiber Probe

Inspect Fiber – Performs visual verification of fiber's quality using an external scope probe.

Requires:
Local and Remote
(SM/MM/MMEF Only)

Switch Fiber – Switches device back to Fiber mode to perform standard tests.

Requires:
Local or Remote
(MPO Only)

Fiber Map – Performs wiremap test to determine mapping of fiber optic.

About – Displays worldwide contact information for Psiber Data.

WireXpert Firmware

Adapter Detection

WireXpert firmware automatically detects which adapters are connected to the local and remote units and configures the testing program to match these adapters. Conflicts between the installed and testing selections generate an error message.

Digital Fault Finding

WireXpert software automatically pinpoints cable fault locations and causes, speeding problem resolution and increasing operator productivity.

System Requirements

WX-4500 provides complete certification solutions to major copper cabling and fiber optic installations. Depending on requirements, separate kits, components or customised adapters can be purchased to provide more specialised tests and certifications.

For a list of available adapters, please visit www.psiberdata.com.

Data Management

WireXpert data management software, *eXport*, enables management of saved results such as finding, renaming, deleting, printing and creating custom labels. Please refer to *User Manual – eXport* for more information.

Adapter Probe

Configuration

WireXpert uses different adapters to test and certify different cabling runs. The device automatically detects which adapters are attached and selects matching test parameters.

Adapter Insertion Counts

Every WireXpert adapter is installed with a memory chip to keep track of the number of tests performed. This data ensures up to date information on the adapter's lifespan. WireXpert will indicate a warning when the adapter insertion counts has expired the specified insertion counts lifespan.

Memory

1Giga byte internal flash memory.

1Giga byte USB Flash Drive included allows for flexible test record storage.

Memory Requirements

The amount of memory that each test result takes up depends on the options that is configured before starting the test. If plots are saved with each test, file size of test results will be generally larger than one that has plots option omitted.

WireXpert allocates approximately 1 GB of internal flash memory for test result storage. The exact amount of memory available depends on the size of the WireXpert software.

The maximum memory size of the USB stick is limited to 4 GB.

Battery Information

WireXpert units are powered by Lithium Ion rechargeable batteries. These batteries contain circuitry that reports their state of charge to WireXpert. The units can be powered by external AC/DC power adapters. Connecting the adapters will charge the batteries concurrently.

A fully charged battery can operate WireXpert for five to eight hours before requiring recharging. Reducing the screen brightness and enabling the sleep function allows WireXpert to run longer on a charge.

WARNING

Do not calibrate or operate WireXpert while the battery is hot immediately after charging.

If the environment is causing the temperature rise, move the unit to a suitable environment. Contact your nearest Technical Support centre if in doubt.

CAUTION

Use only the supplied power supplies with the WireXpert kit. Using other powers may damage the tester and void its warranty.

Battery Safety

1. To avoid the risk of fire, burns or damage to your battery pack, do not allow metal objects to touch the battery contacts.
2. The battery pack is suitable for use only with compatible WireXpert devices.
3. Do not disassemble the battery pack. There are no user serviceable parts inside. Do not dispose the battery pack in fire or water.
4. Handle a damaged or leaking battery with extreme care. If you come into contact with the electrolyte, wash the exposed area with soap and water. If the electrolyte contacts the eye, flush the eye with water for 15 minutes and seek medical attention.
5. Do not expose the battery pack to high storage temperatures (above 55°C).

6. When discarding a battery pack, contact your local waste disposal provider regarding local restrictions on the disposal or recycling of Lithium Ion batteries.
7. To obtain a replacement battery (part number N2641A-135), contact your local dealer.
8. Do not charge the battery pack if the ambient temperature is above 40°C.

Power Supply

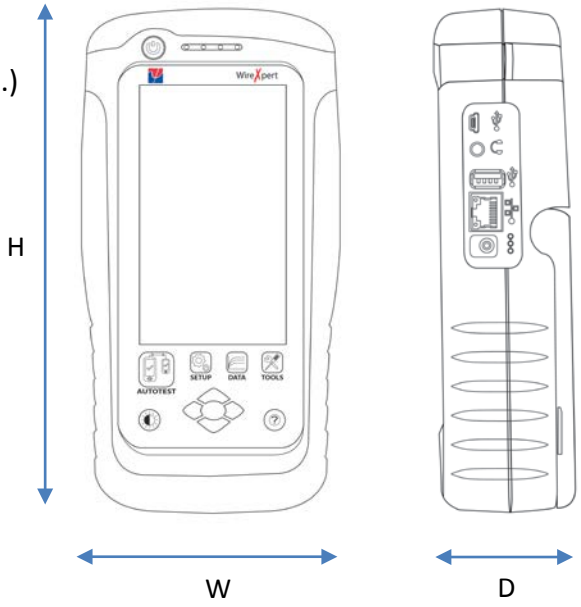
- Removable/rechargeable Li-Ion batteries provide more than 8 hours of continuous operation.
- AC power: 100~240V AC plugs directly into the battery. Can be recharged separate from the instrument.

Dimension

- Size: 220mmH x 110mmW x 53mmD
- Weight: approx. 1.0 kg (approx. 2.2 lbs.)

Environmental Conditions

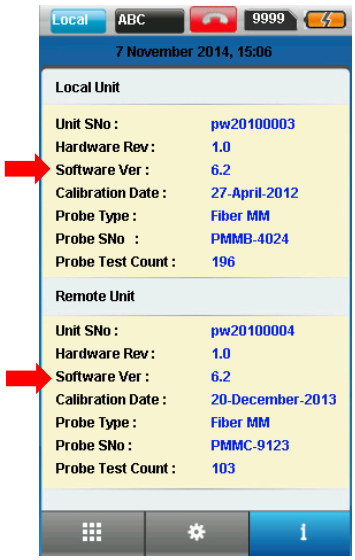
- Operating temperature: 0C to +40C
- Storage Temperature: -10C to +55C
- Relative humidity: 10% to 80%



Chapter 2: Using WireXpert

How do I check the firmware version?

Press the SETUP button > Device Information to check the software version and hardware version numbers. The device information page also display the last calibrated date. You are reminded to recalibrate your device after one year.



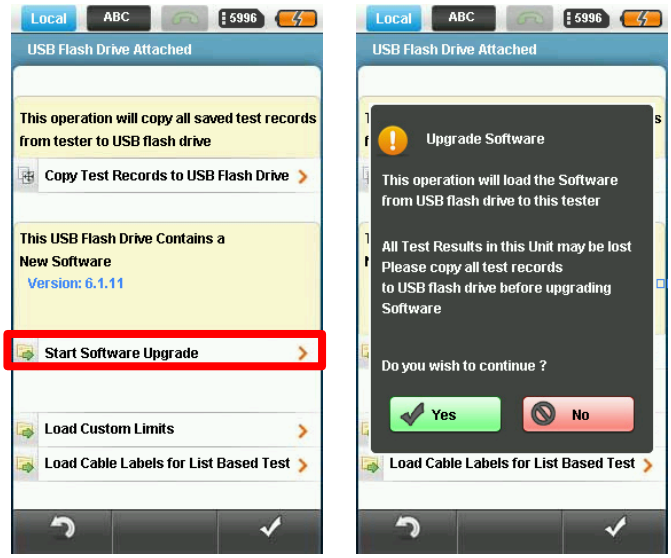
How do I know if I have the correct adapter for testing?

Press the SETUP button > Test Settings to check the test options available to determine if the right adapter has been installed.

How do I upgrade the firmware?

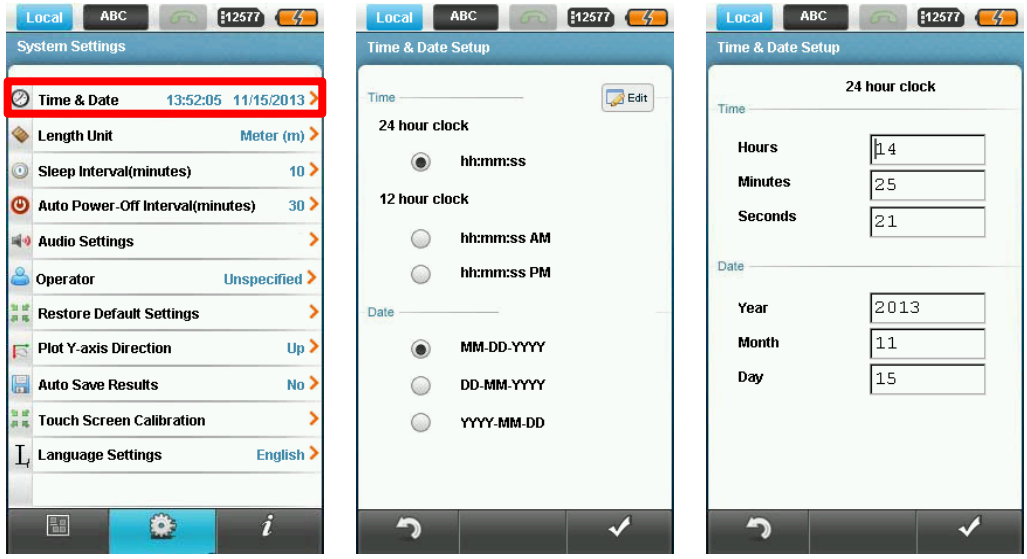
To upgrade WireXpert's firmware,

- Download and install the latest build of eXport software from psiberdata.com
- Export the firmware using an USB flash drive
- Backup the test results in the device
- Insert the flash drive to the USB port on WireXpert
- Choose the upgrade firmware option and click "Yes" to begin upgrade


Local
ABC
5996
USB Flash Drive Attached
This operation will copy all saved test records from tester to USB flash drive
Copy Test Records to USB Flash Drive
This USB Flash Drive Contains a New Software
Version: 6.1.11
Start Software Upgrade
Load Custom Limits
Load Cable Labels for List Based Test
Upgrade Software
This operation will load the Software from USB flash drive to this tester
All Test Results in this Unit may be lost
Please copy all test records to USB flash drive before upgrading Software
Do you wish to continue ?
Yes
No

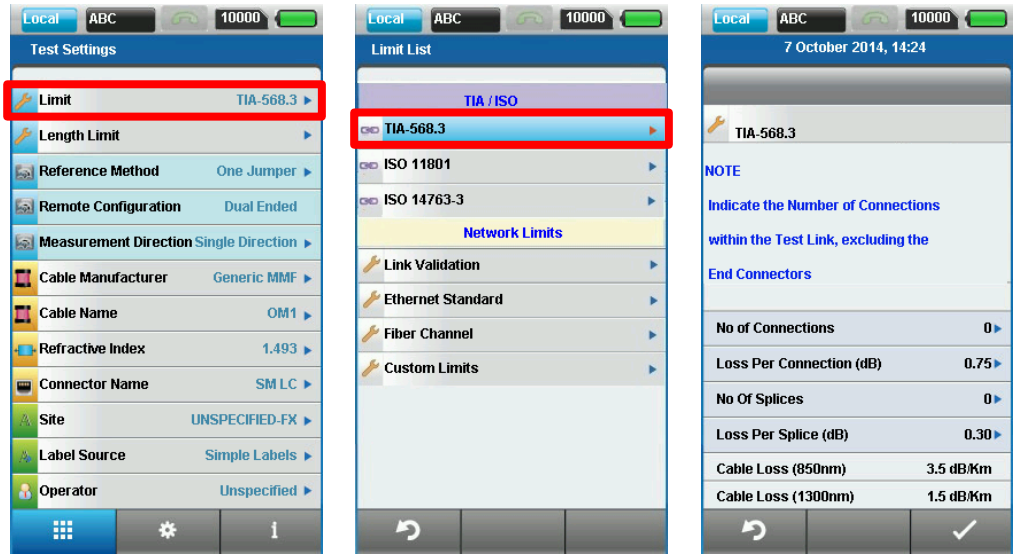
How do I setup date and time?

Press the SETUP button > System Settings and select the “Time and Date” option. Time and date display format can be selected, and time can be manually configured to match your local settings.



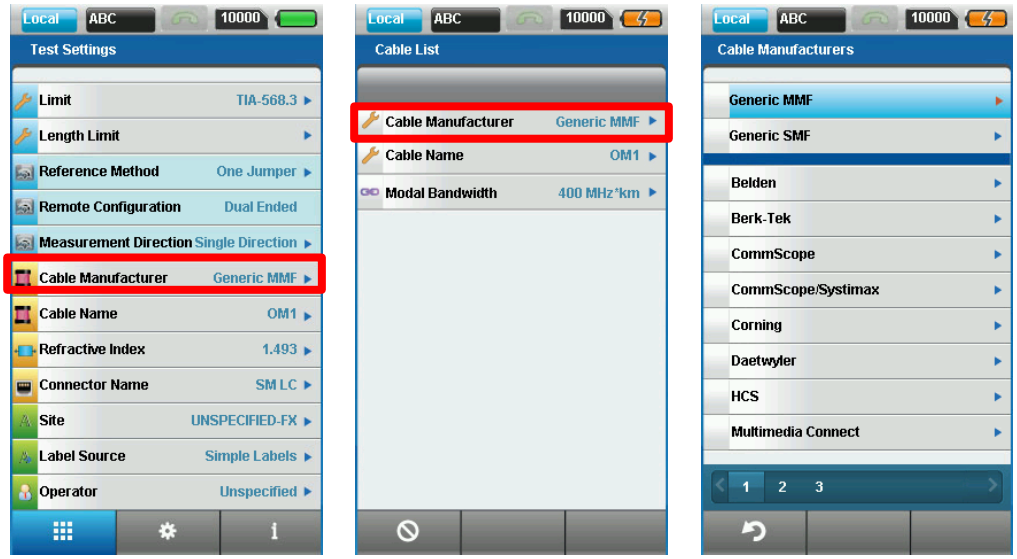
How do I select the limit?

Press the SETUP button > Test Settings > Limits to choose from a list of commonly used limits. Three recently used limit will be on top of the list.



How do I select the cable type for certification?

Press the SETUP button > Test Settings > Cable Manufacturer to choose from a list of cable manufacturers. If unsure of manufacturer, choose “Generic MMF” or “Generic SMF”, or “Customized Cable” to create custom cable.

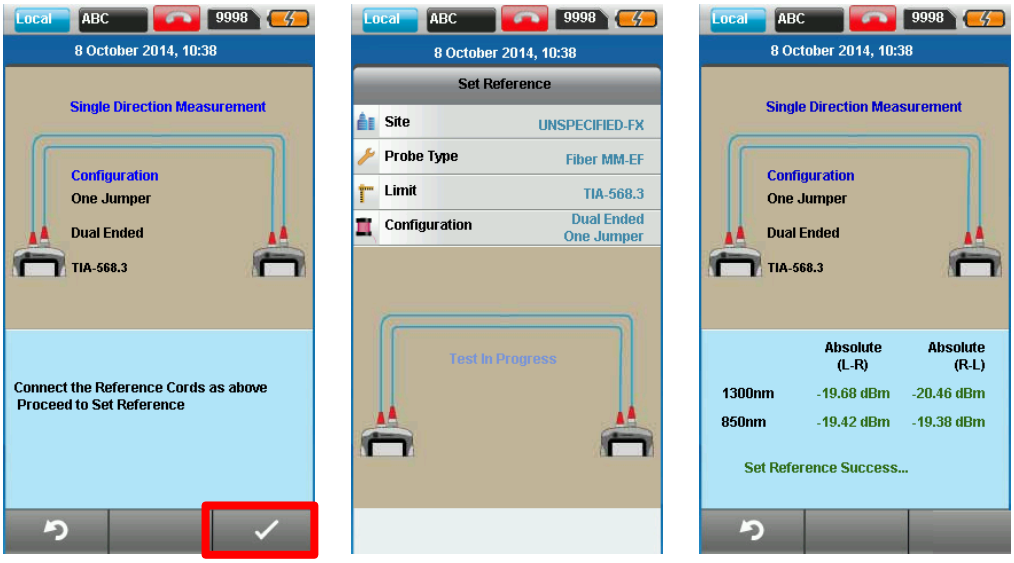


How do I set reference between Local and Remote units?

It is recommended to perform a set reference measurement if the Local and Remote units are being used for the first time. If there is a mismatch in firmware versions or expired calibrations, WireXpert will require you to perform a set reference.

To set reference,

1. Connect matching adapters to the Local and Remote units.
2. If MPO, connect only the Local adapter to the Local unit and Remote adapter to the Remote unit.
3. Connect the 2 units together using the correct cords provided in the kit.
4. Press the TOOLS button > Set Reference
5. Click “next” to begin set reference.



Set Reference for MMEF

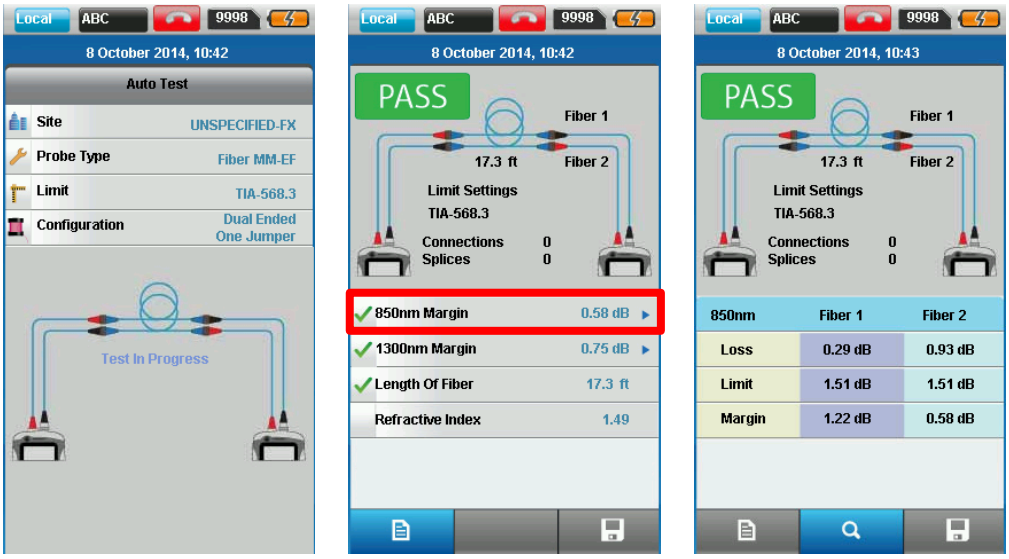
Set Reference for MME

6. Set Reference will fail in the event of-
    - Adapter probe mismatch, i.e., one SM and one MM adapters
    - Firmware version mismatch
    - No connection between Local and Remote units
    - Time-out

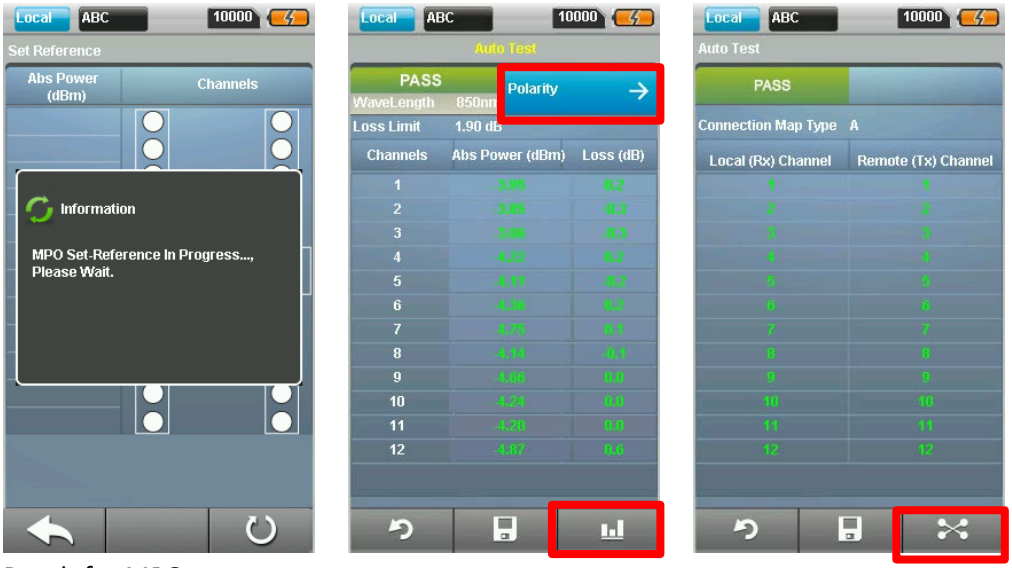
How do I perform a certification test (AUTOTEST)?

Press the AUTOTEST button once settings and limits have been selected. WireXpert will use the last configuration or factory settings to perform the AUTOTEST if new settings are not configured.

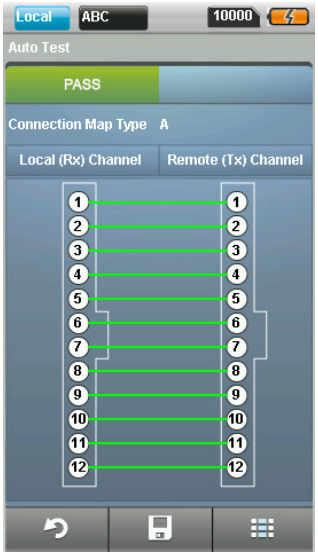
WireXpert will display summarized result with PASS or FAIL once autotest is completed. Press the “view details” button to view the comprehensive result.



Result for MMEF autotest/Typical result screen for SM and MM.
Click on the wavelength to display a more comprehensive individual result.

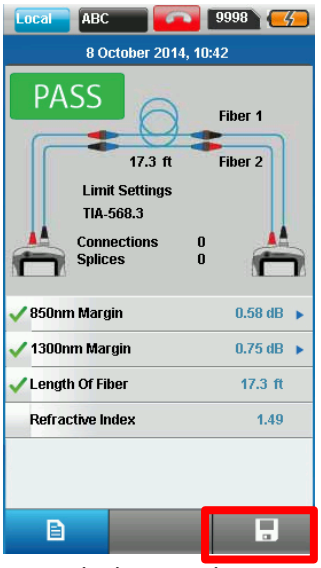


Result for MPO autotest.
Click on the different options to display a more comprehensive individual result.

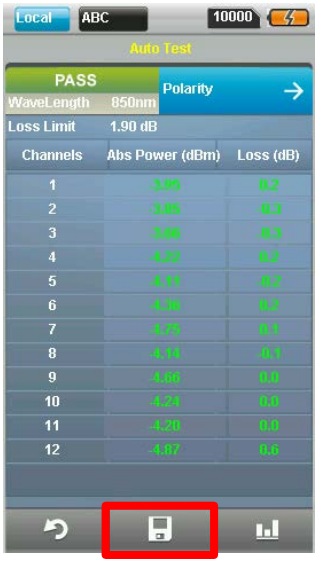


How do I save/view/delete test results?

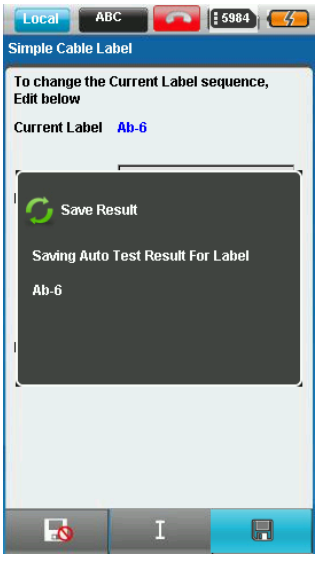
Test results can be manually saved by pressing the “save” button after an autotest is completed. When prompted, key in the record name to continue saving.



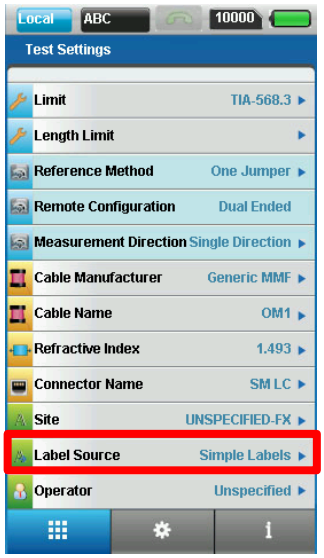
Typical Fiber result screen



MPO result screen

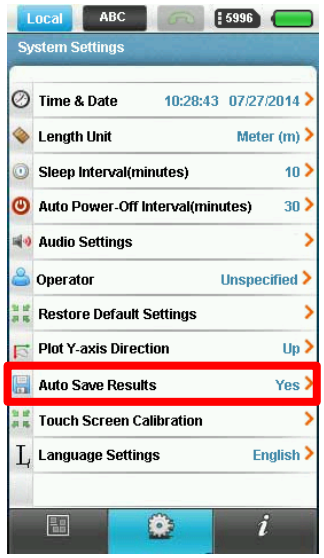


If auto saving is enabled (SETUP > System Settings > Auto Save Results), test results will be automatically saved with reference to the selected Label Source (SETUP > Test Settings > Label Source) when autotest is completed.



Typical Fiber Test Settings

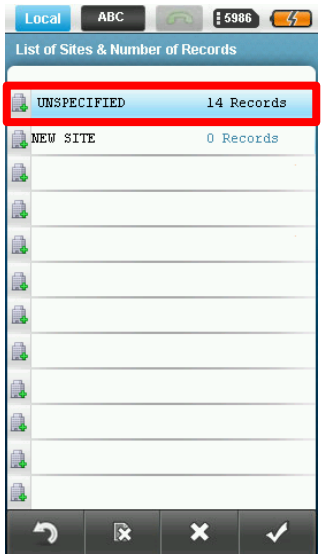
MPO Test Settings

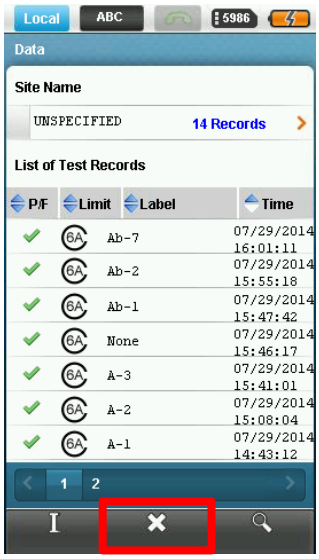


System Settings

To view saved results,

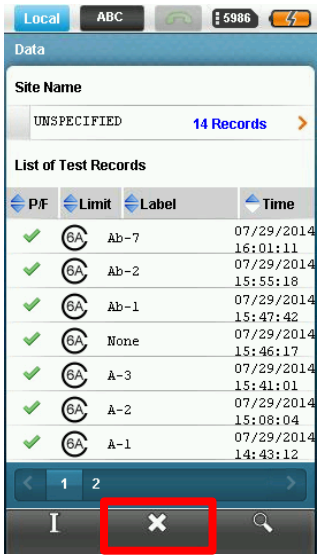
1. Press the DATA button.
2. Select the site where the test results are saved. Click “ok” to proceed.
3. Select result and click “view” to view results.
4. Select the next page if for more results.





To delete a saved result,

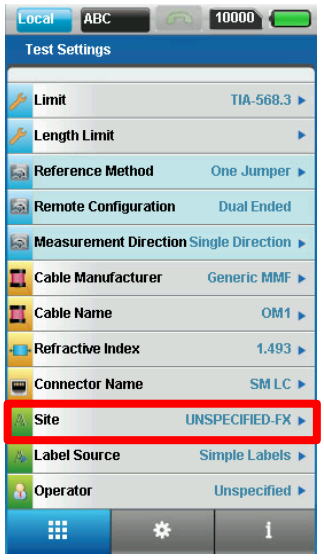
1. Press the DATA button.
2. Select the site where the test results are saved. Click “ok” to proceed.
3. Select result and click “delete” to delete result.



How do I add/select/delete a new site?

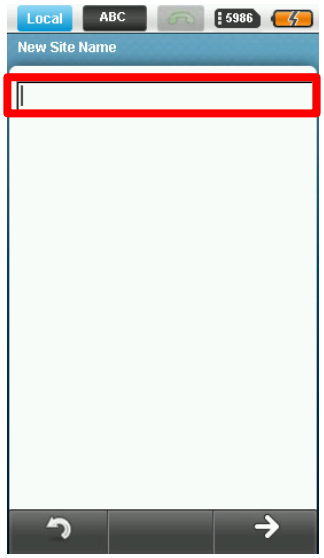
1. Press the SETUP button > Test Settings > Site to begin adding a new site.
2. Click the “new” button to add a new site.
3. Click on the empty field and enter new site name using the keypad on the screen.
4. Click “OK” to continue.
5. Site properties are optional, but they provide additional information of the site.
6. Click “ok” to save site and proceed.

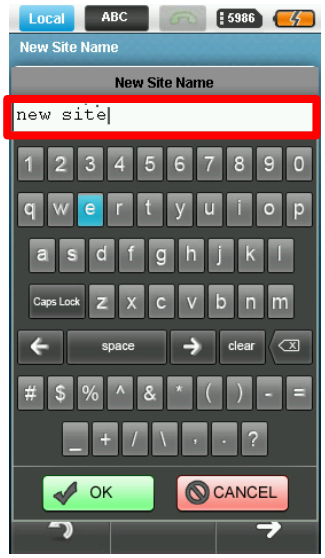
By default, WireXpert creates an “UNSPECIFIED” site for default saving if new sites are not created.

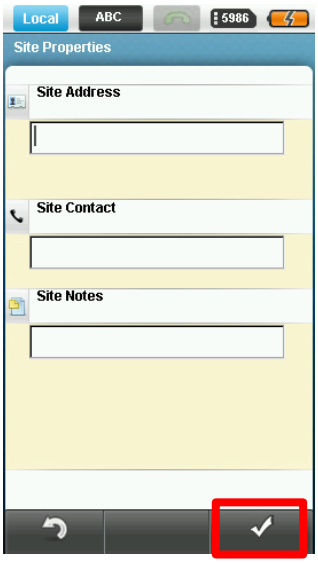


Typical Fiber Test Settings

MPO Test Settings

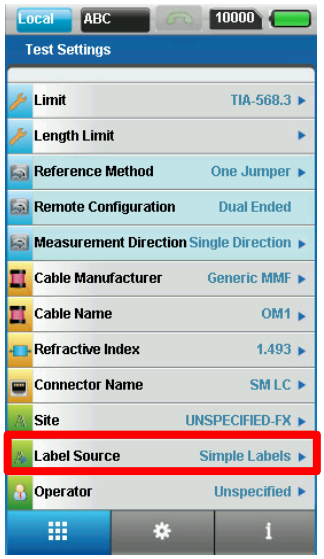






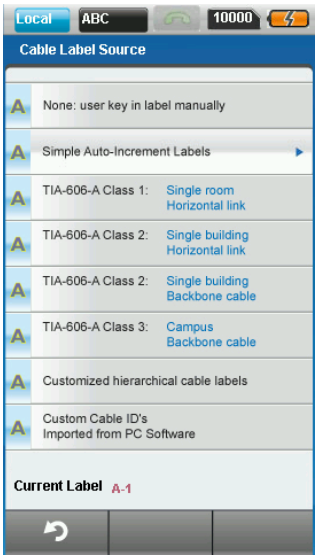
How do I change the labelling scheme for saving test results?

Press the SETUP button > Test Settings > Label Source to choose from a list of scheme.



Typical Fiber Test Settings

MPO Test Settings

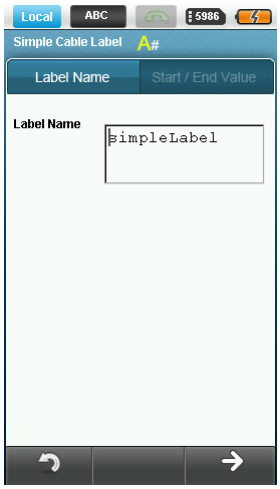

Local
ABC
10000
Cable Label Source
None: user key in label manually
Simple Auto-Increment Labels
TIA-606-A Class 1: Single room Horizontal link
TIA-606-A Class 2: Single building Horizontal link
TIA-606-A Class 2: Single building Backbone cable
TIA-606-A Class 3: Campus Backbone cable
Customized hierarchical cable labels
Custom Cable ID's Imported from PC Software
Current Label A-1

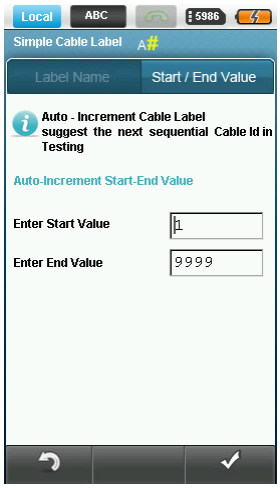
None

Manual input of label names is required for every saving of result.

Simple Auto-Increment Labels (Simple Label)

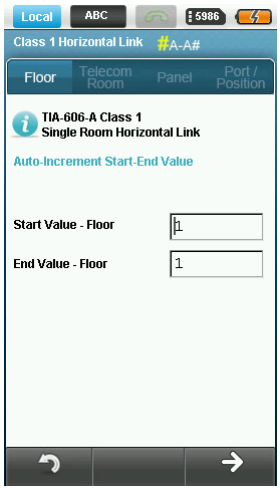
Provides simple numeric increments to a prefix.

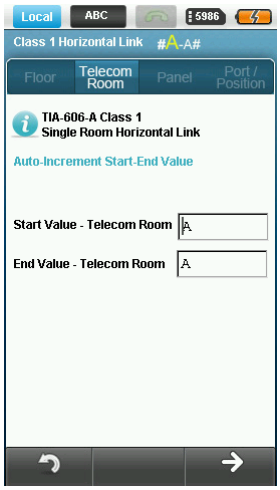


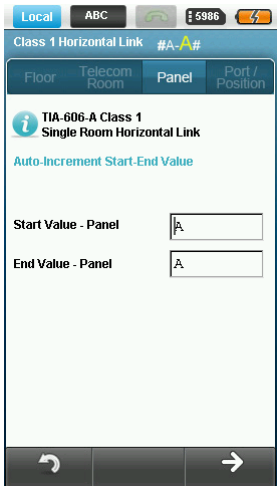


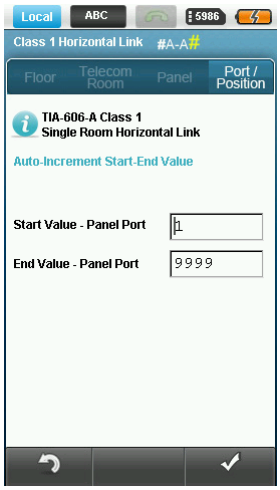
TIA-606-A Class 1 (Single Room Horizontal Link)

TIA-606-A Class 1 standard labelling scheme mainly used to support labelling for a building or premises that is served in a single equipment room.



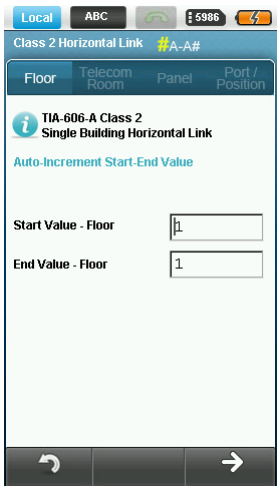


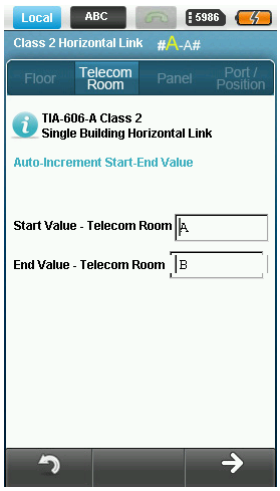


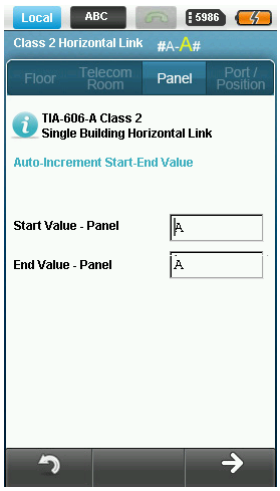


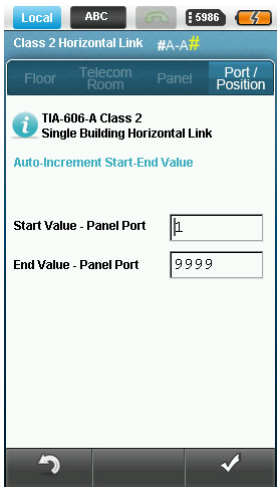
TIA-606-A Class 2 (Single Building Horizontal Link/Single Building Backbone Cable)

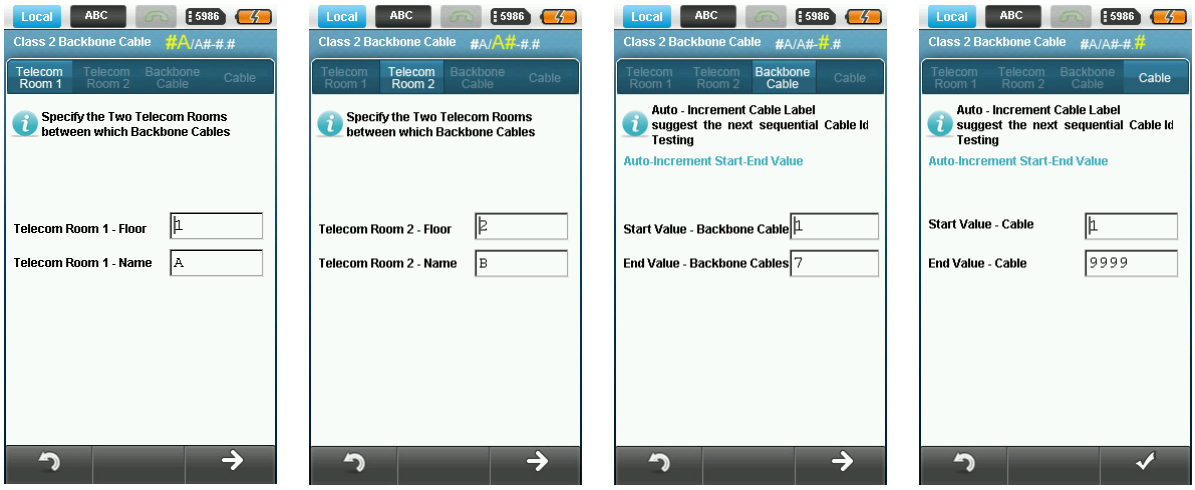
TIA-606-A Class 2 standard labelling scheme, mainly used to support labelling of infrastructure with one or more telecommunication spaces in a single building.





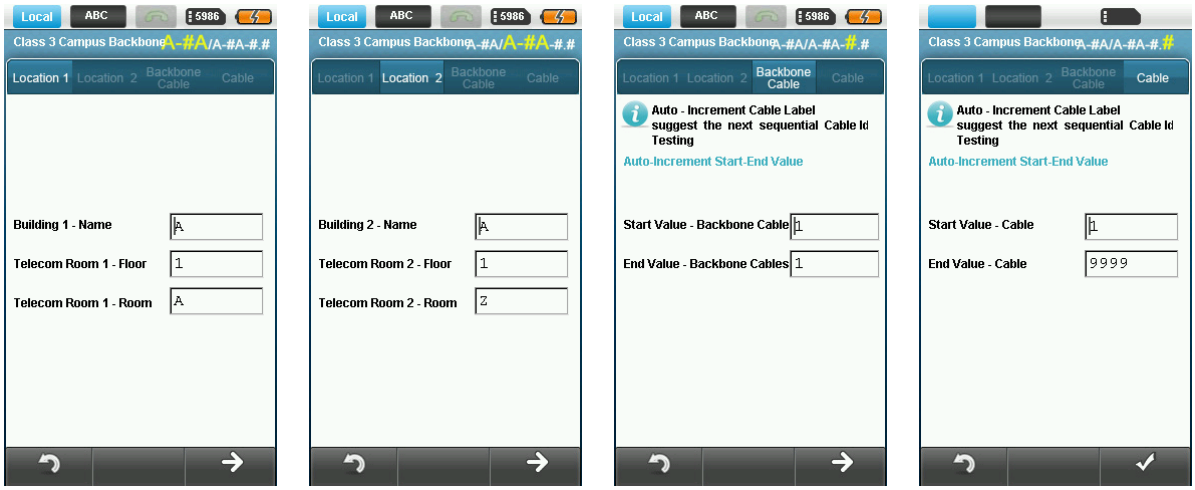





Local
ABC
5986
Class 2 Backbone Cable #A/A#-#.#
Telecom Room 1
Telecom Room 2
Backbone Cable
Cable
Specify the Two Telecom Rooms between which Backbone Cables
Telecom Room 1 - Floor
Telecom Room 1 - Name
Telecom Room 2 - Floor
Telecom Room 2 - Name
Auto - Increment Cable Label suggest the next sequential Cable Id Testing
Auto-Increment Start-End Value
Start Value - Backbone Cable
End Value - Backbone Cables
Start Value - Cable
End Value - Cable
9999

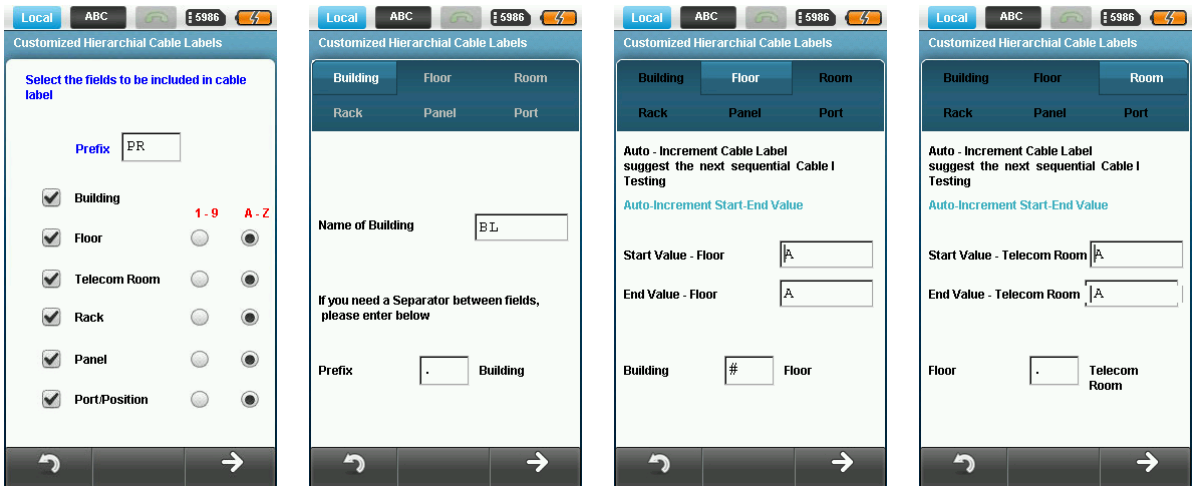
TIA-606-A Class 3 (Campus Backbone Cable)

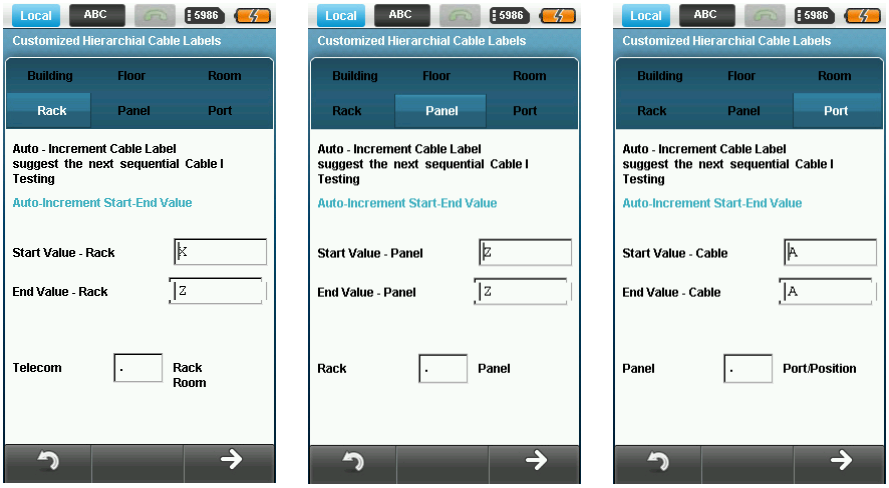
TIA-606-A Class32 standard labelling scheme, mainly used to support labelling for multiple buildings in a single site.



Customized Hierarchical Cable Labels (Customized Labels)

Customized labelling scheme in hierarchical format with prefix to support infrastructure with multiple floors, telecom rooms, racks, patch panels and ports/positions in a single building. *Field tester required to perform certification in sequential order.*

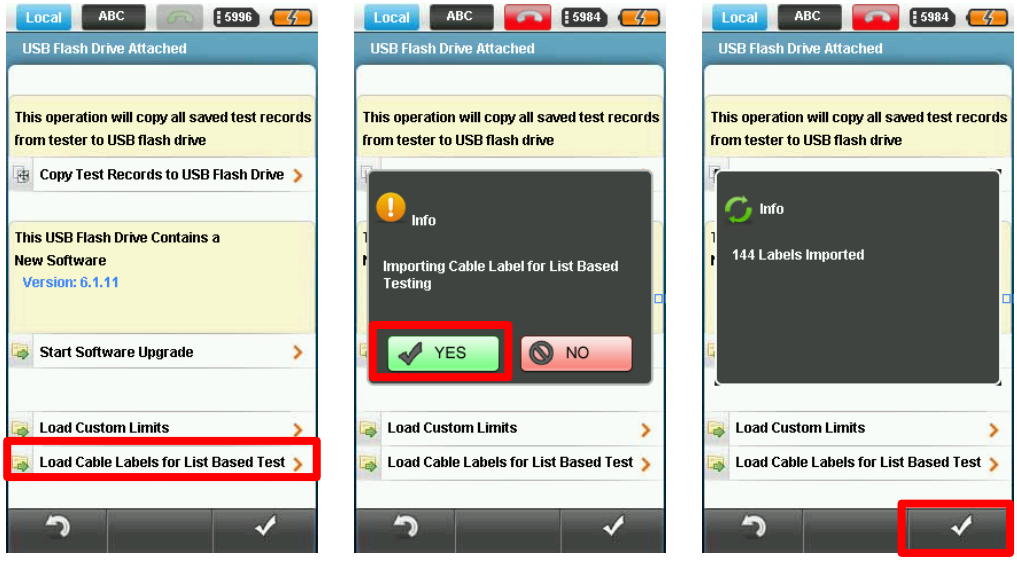


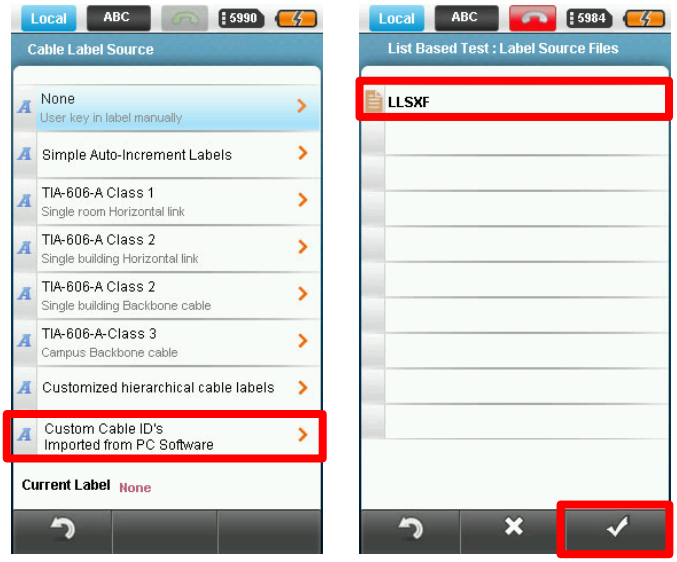


Custom Cable ID's Imported from PC Software (List Based Testing)

Customized labelling scheme in hierarchical format with prefix to support infrastructure with multiple or without floors, telecom rooms, racks, patch panels and ports/positions in a single building generated using eXport software only. Ideal for project managers with specified labelling format. *Field testers can choose which labels to test from the imported labels.*

1. Select or create a Site where the custom list will be used.
2. Insert USB flash drive to USB port on WireXpert.
3. Device will automatically detect USB flash drive.
4. Select "Load Cable Labels for List Based Test".
5. Click "YES" to begin import. Click the "ok" button to proceed.
6. Press the SETUP button > Cable Label Source
7. Select Custom Cable ID's Imported from PC Software
8. Select label source file and click "ok" to continue.





Refer *User Manual – eXport* for more information on generating list based labels.

9. Press the AUTOTEST button to display the loaded cable list.
10. Select label from list to begin autotest.
11. WireXpert will automatically save a PASS result and return to the list, or allows you to save or conduct a re-test for a FAIL result manually.
12. Select a tested label to view the results. A tick indicates a PASS and a cross indicates a FAIL result. A re-test can be conducted by pressing “Retest”.

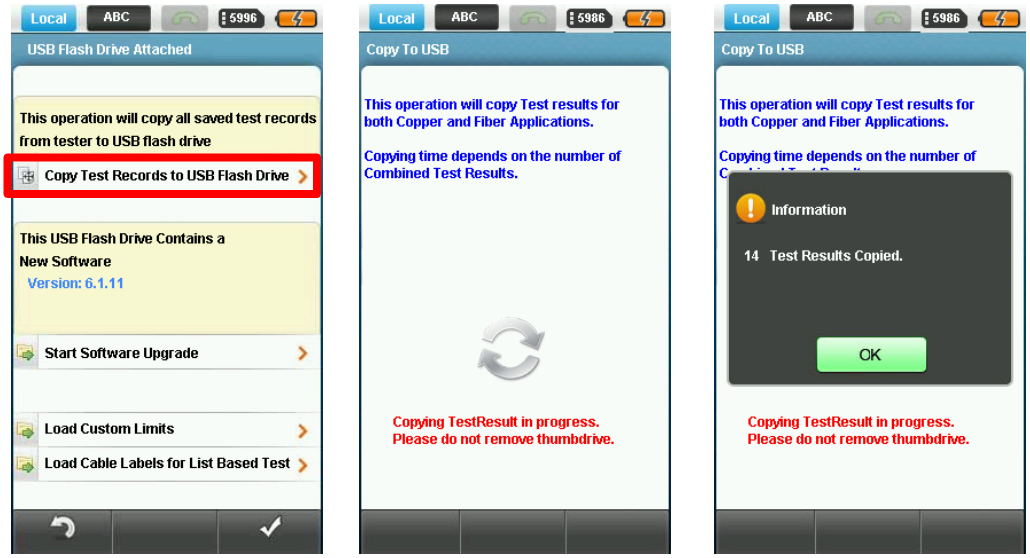
13. Press the “back” or AUTOTEST button to return to the list.

How do I export test results into eXport?

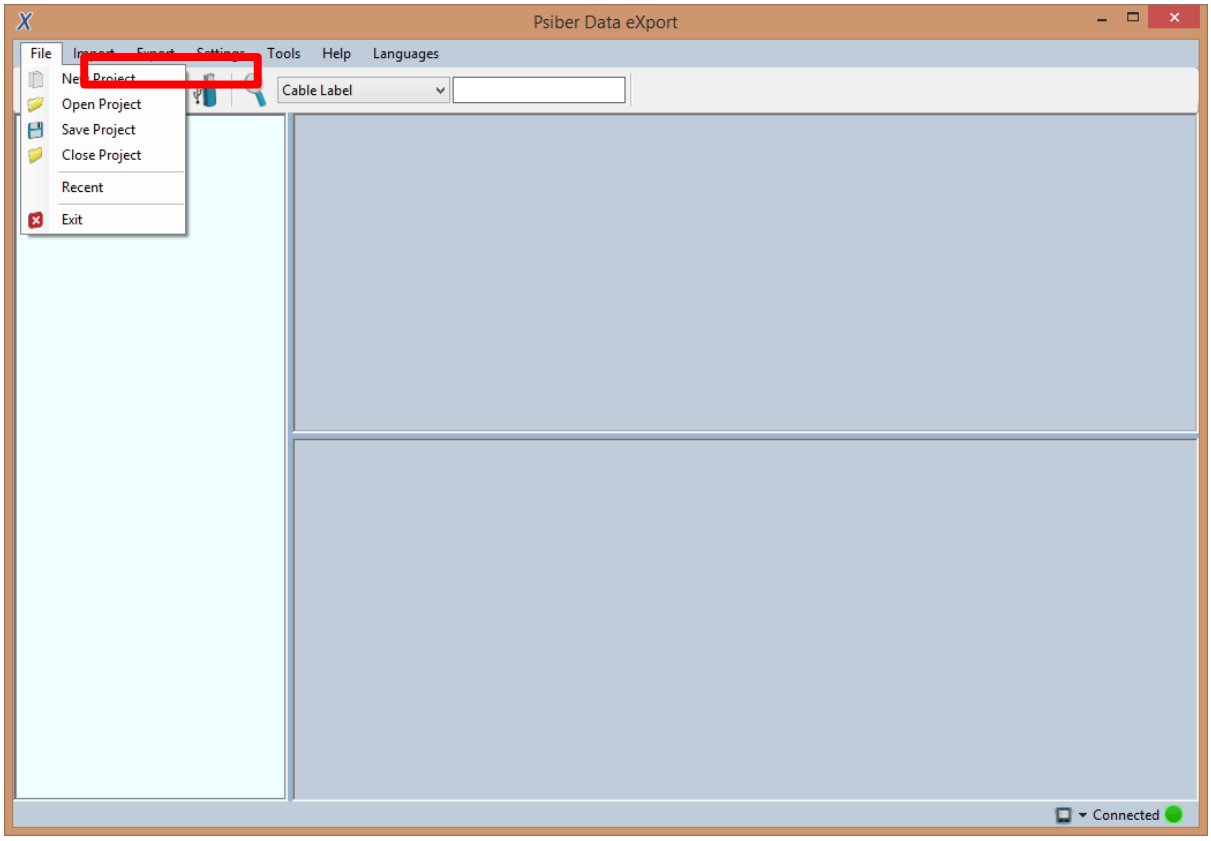
eXport is a data management software designed to work seamlessly with WireXpert. Saved results can be exported using the following methods;

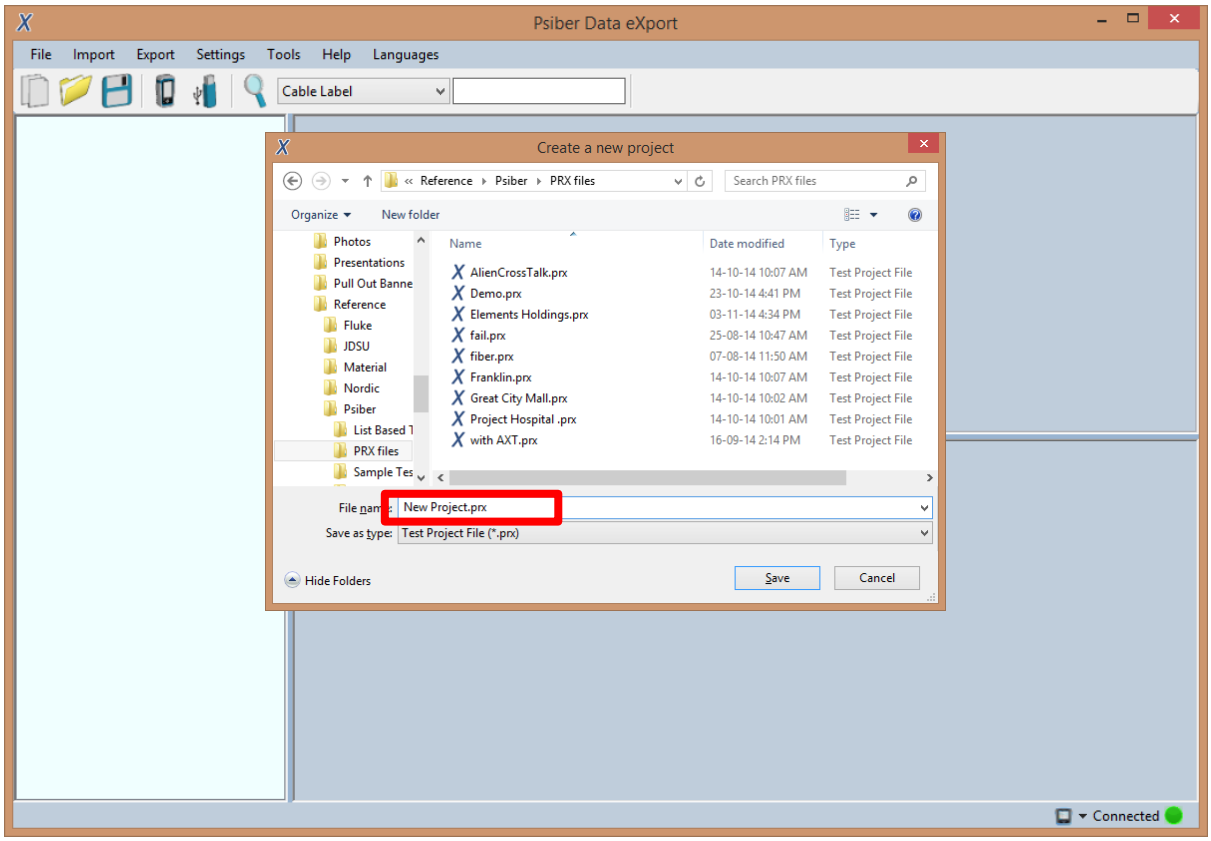
USB Flash Drive

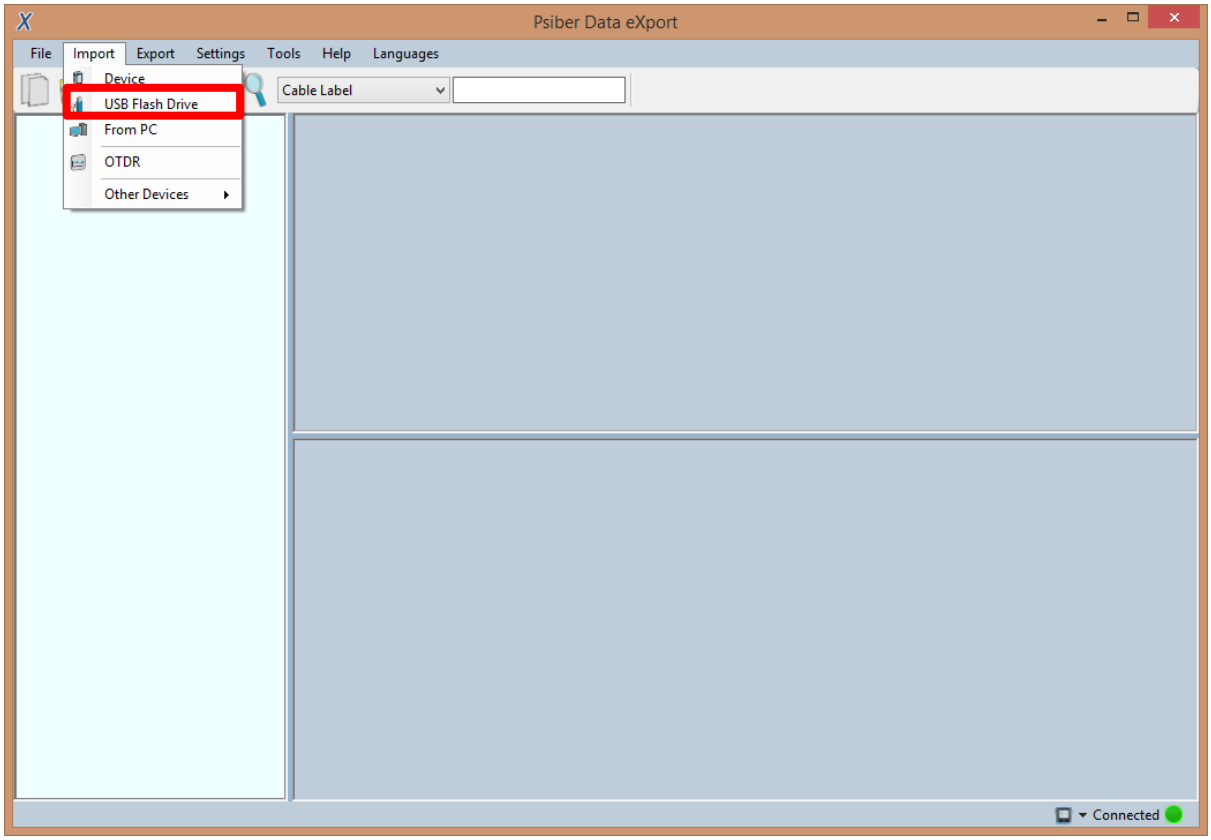
1. Insert USB flash drive to USB port on WireXpert.
2. Device will automatically detect flash drive.
3. Select “Copy Test Records to USB Flash Drive” to begin copy.
4. Click “OK” to proceed.

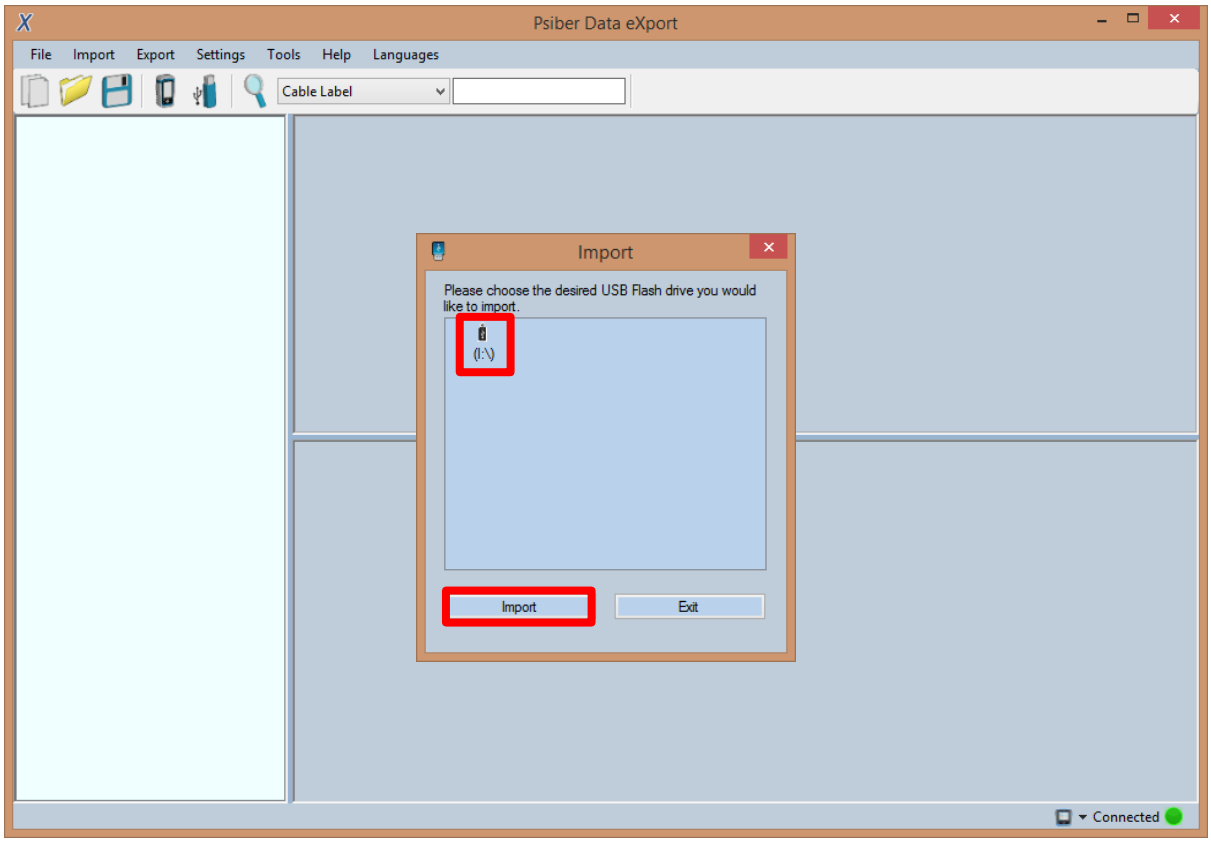

Local
ABC
5996
USB Flash Drive Attached
This operation will copy all saved test records from tester to USB flash drive
Copy Test Records to USB Flash Drive
This USB Flash Drive Contains a New Software
Version: 6.1.11
Start Software Upgrade
Load Custom Limits
Load Cable Labels for List Based Test
Local
ABC
5986
Copy To USB
This operation will copy Test results for both Copper and Fiber Applications.
Copying time depends on the number of Combined Test Results.
Copying TestResult in progress.
Please do not remove thumbdrive.
Local
ABC
5986
Copy To USB
This operation will copy Test results for both Copper and Fiber Applications.
Copying time depends on the number of
Information
14 Test Results Copied.
OK
Copying TestResult in progress.
Please do not remove thumbdrive.

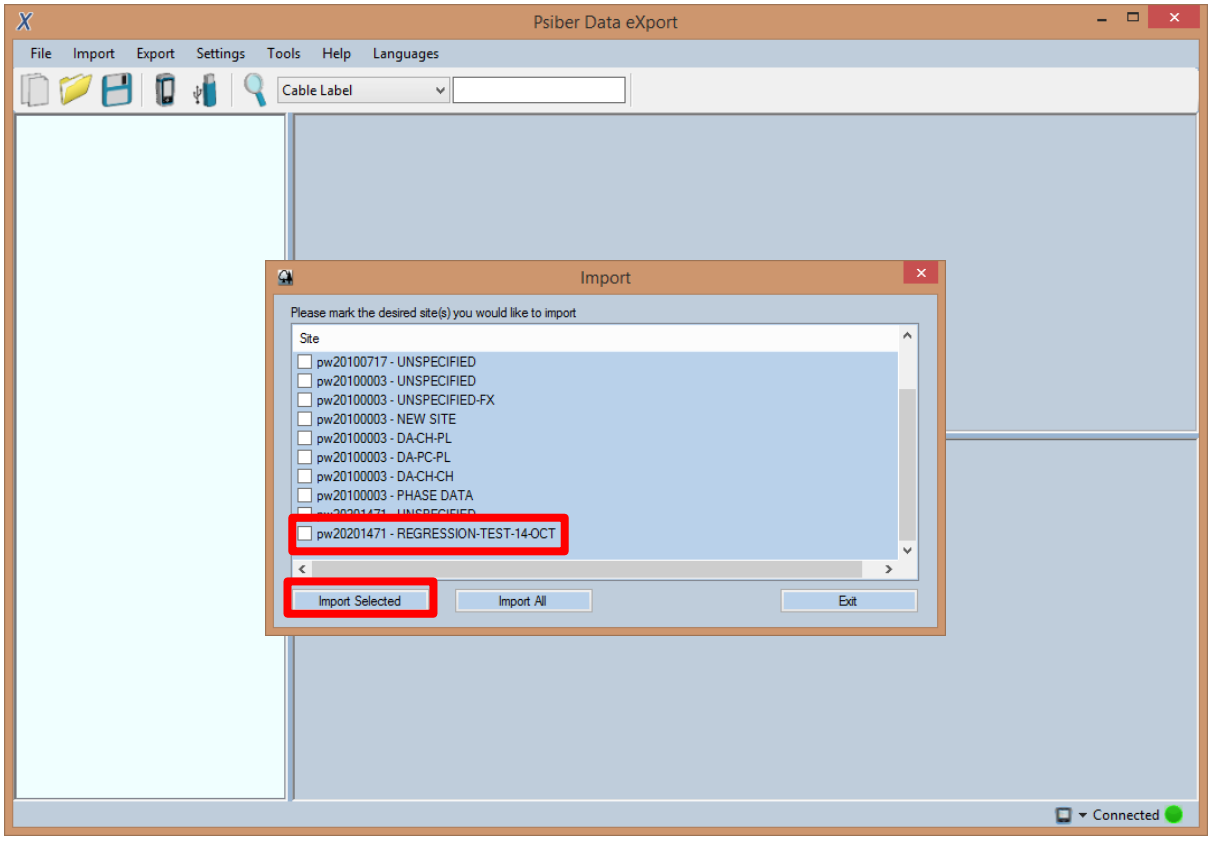
5. Launch eXport software.
6. Go to File > Create New Project to create new project space.
7. Go to Import > USB Flash Drive and select the flash drive. Click “Import”.
8. Select database and click “Import Selected” to import or click “Import All” for all databases.

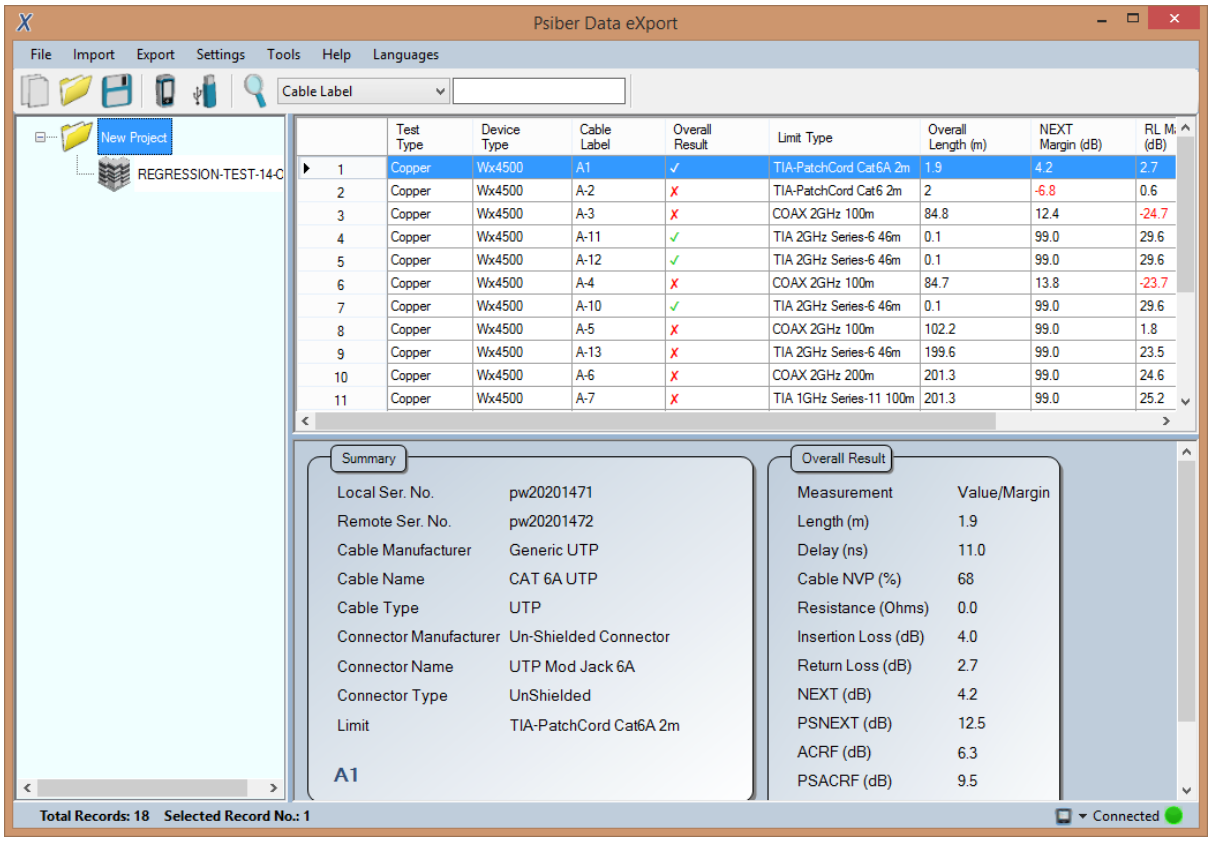

Psiber Data eXport
File
Import
Export
Settings
Tools
Help
Languages
Project
Open Project
Save Project
Close Project
Recent
Exit
Cable Label
Connected


Psiber Data eXport
File
Import
Export
Settings
Tools
Help
Languages
Cable Label
Create a new project
Reference
Psiber
PRX files
Search PRX files
Organize
New folder
Photos
Presentations
Pull Out Banne
Reference
Fluke
JDSU
Material
Nordic
Psiber
List Based T
PRX files
Sample Tes
Name
Date modified
Type
AlienCrossTalk.prx
Demo.prx
Elements Holdings.prx
fail.prx
fiber.prx
Franklin.prx
Great City Mall.prx
Project Hospital .prx
with AXT.prx
Test Project File
File name:
New Project.prx
Save as type:
Test Project File (*.prx)
Hide Folders
Save
Cancel
Connected


Psiber Data eXport
File
Import
Export
Settings
Tools
Help
Languages
Device
USB Flash Drive
From PC
OTDR
Other Devices
Cable Label
Connected

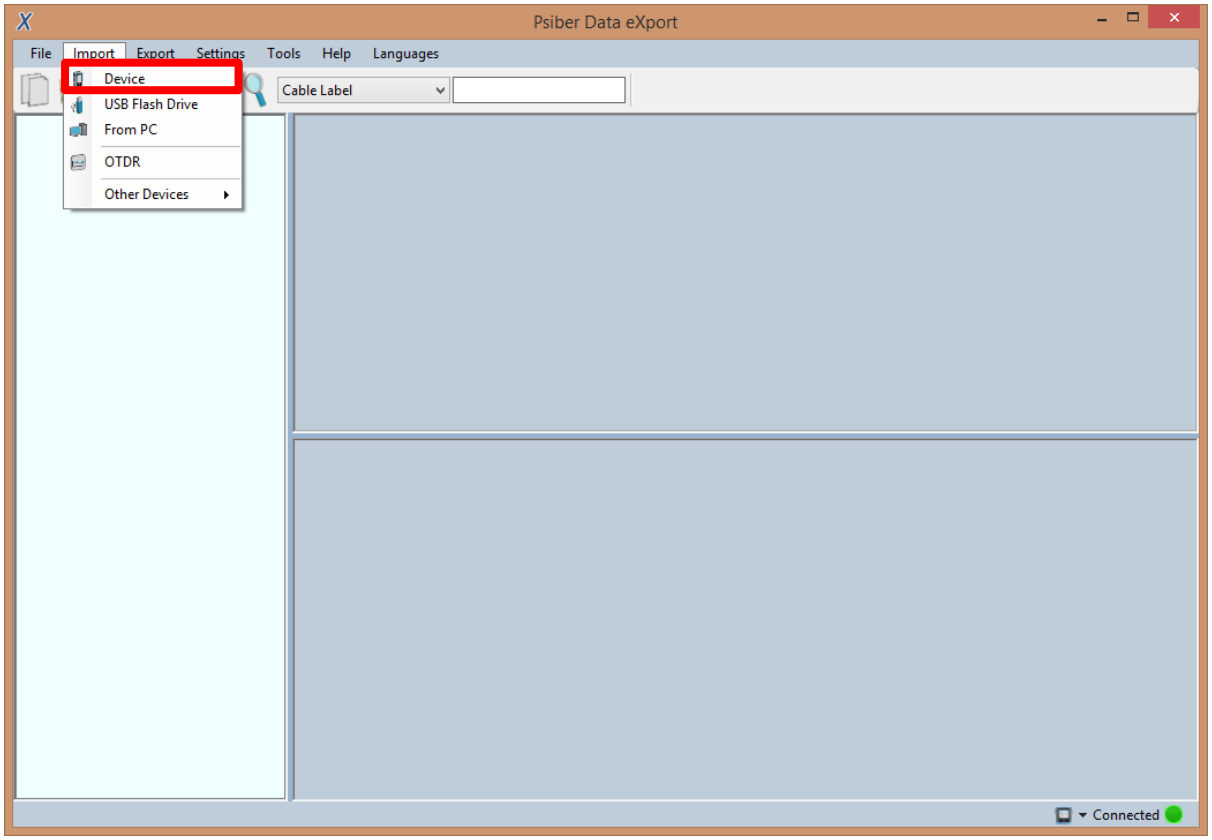

Psiber Data eXport
File
Import
Export
Settings
Tools
Help
Languages
Cable Label
Import
Please choose the desired USB Flash drive you would like to import.
(I:\)
Import
Exit
Connected

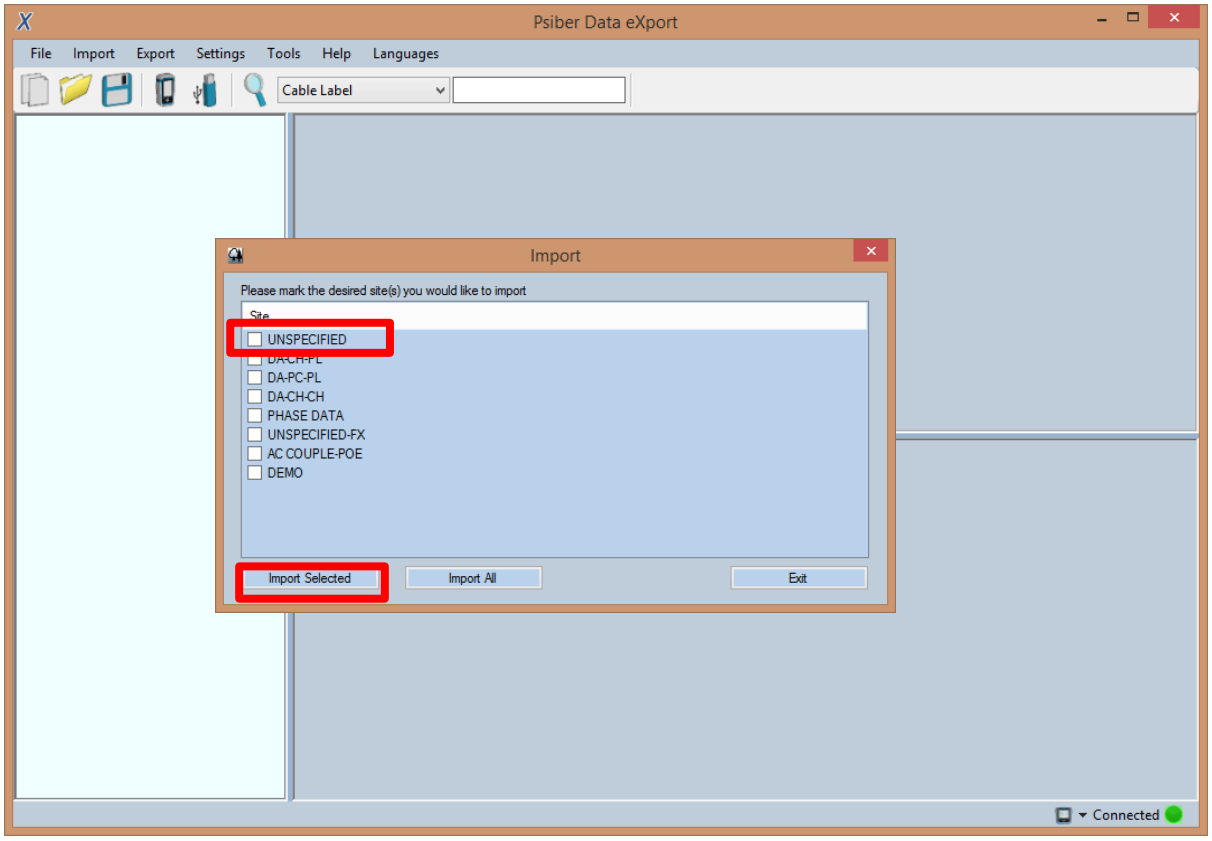

Psiber Data eXport
File Import Export Settings Tools Help Languages
Cable Label
Import
Please mark the desired site(s) you would like to import
Site
pw20100717 - UNSPECIFIED
pw20100003 - UNSPECIFIED
pw20100003 - UNSPECIFIED-FX
pw20100003 - NEW SITE
pw20100003 - DA-CH-PL
pw20100003 - DA-PC-PL
pw20100003 - DA-CH-CH
pw20100003 - PHASE DATA
pw20201471 - REGRESSION-TEST-14-OCT
Import Selected
Import All
Exit
Connected

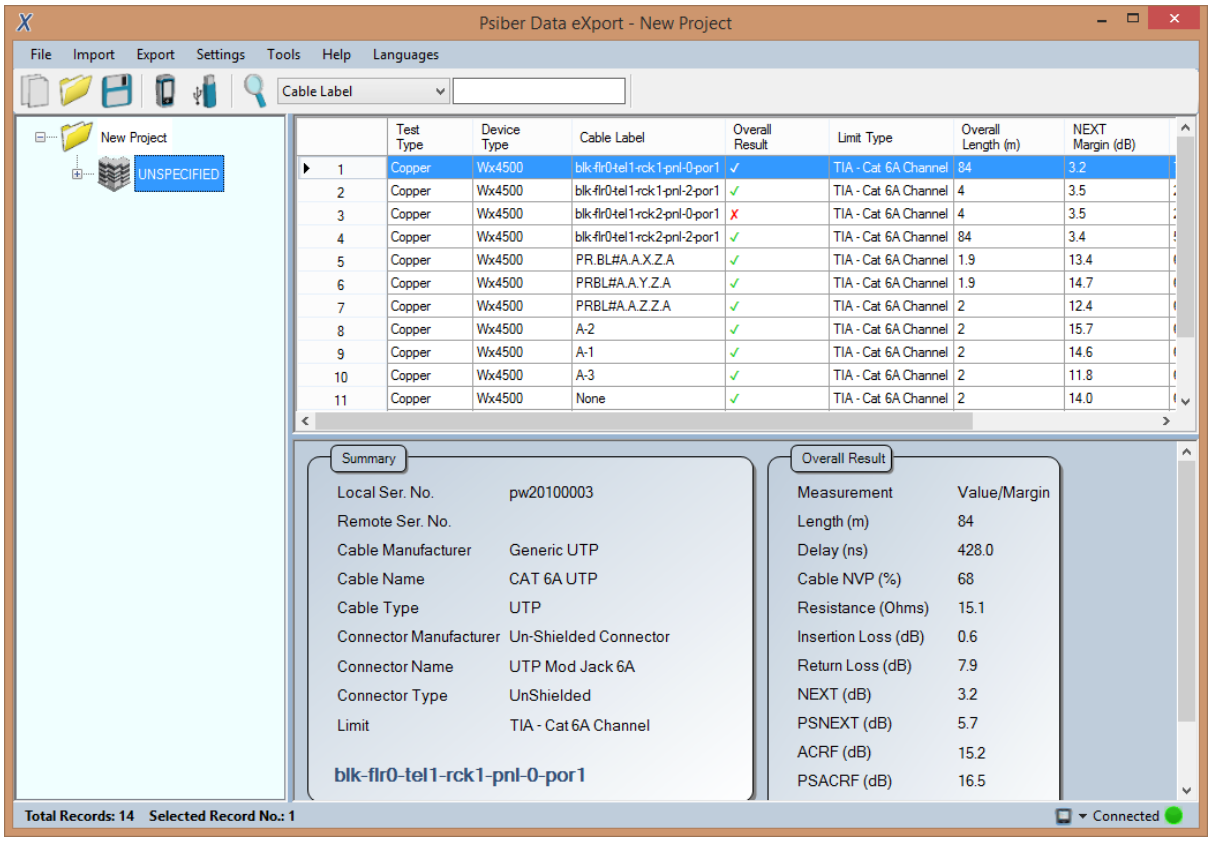

Psiber Data eXport
File Import Export Settings Tools Help Languages
Cable Label
New Project
REGRESSION-TEST-14-C
Test Type | Device Type | Cable Label | Overall Result | Limit Type | Overall Length (m) | NEXT Margin (dB) | RL M (dB)
1 Copper Wx4500 A1 ✓ TIA-PatchCord Cat6A 2m 1.9 4.2 2.7
2 Copper Wx4500 A-2 ✗ TIA-PatchCord Cat6 2m 2 -6.8 0.6
3 Copper Wx4500 A-3 ✗ COAX 2GHz 100m 84.8 12.4 -24.7
4 Copper Wx4500 A-11 ✓ TIA 2GHz Series-6 46m 0.1 99.0 29.6
5 Copper Wx4500 A-12 ✓ TIA 2GHz Series-6 46m 0.1 99.0 29.6
6 Copper Wx4500 A-4 ✗ COAX 2GHz 100m 84.7 13.8 -23.7
7 Copper Wx4500 A-10 ✓ TIA 2GHz Series-6 46m 0.1 99.0 29.6
8 Copper Wx4500 A-5 ✗ COAX 2GHz 100m 102.2 99.0 1.8
9 Copper Wx4500 A-13 ✗ TIA 2GHz Series-6 46m 199.6 99.0 23.5
10 Copper Wx4500 A-6 ✗ COAX 2GHz 200m 201.3 99.0 24.6
11 Copper Wx4500 A-7 ✗ TIA 1GHz Series-11 100m 201.3 99.0 25.2
Summary
Local Ser. No. pw20201471
Remote Ser. No. pw20201472
Cable Manufacturer Generic UTP
Cable Name CAT 6A UTP
Cable Type UTP
Connector Manufacturer Un-Shielded Connector
Connector Name UTP Mod Jack 6A
Connector Type UnShielded
Limit TIA-PatchCord Cat6A 2m
A1
Overall Result
Measurement Value/Margin
Length (m) 1.9
Delay (ns) 11.0
Cable NVP (%) 68
Resistance (Ohms) 0.0
Insertion Loss (dB) 4.0
Return Loss (dB) 2.7
NEXT (dB) 4.2
PSNEXT (dB) 12.5
ACRF (dB) 6.3
PSACRF (dB) 9.5
Total Records: 18 Selected Record No.: 1
Connected

Device (Direct connection via USB cable)

1. Connect WireXpert to your PC using a mini USB cable.
2. Launch eXport software.
3. Go to File > Create New Project to create new project space.
4. Go to Import > Device.
5. Select database and click “Import Selected” to import or click “Import All” for all databases.



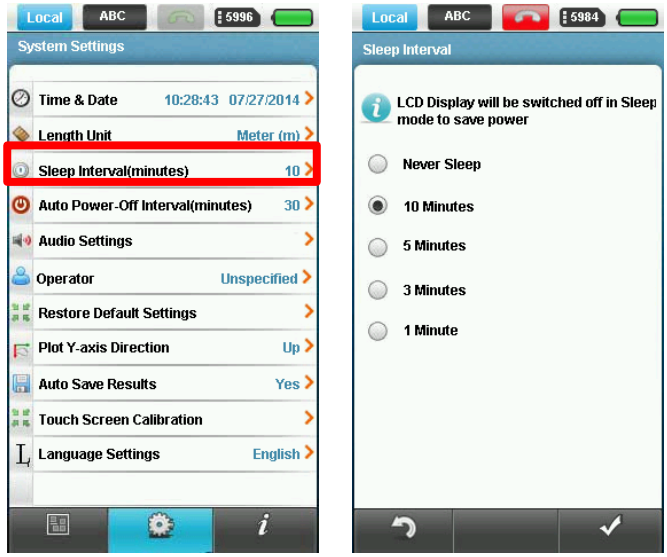



Psiber Data eXport - New Project
File Import Export Settings Tools Help Languages
Cable Label
New Project
UNSPECIFIED
Test Type | Device Type | Cable Label | Overall Result | Limit Type | Overall Length (m) | NEXT Margin (dB)
1 Copper Wx4500 blk-flr0-tel1-rck1-pnl-0-por1 ✓ TIA - Cat 6A Channel 84 3.2
2 Copper Wx4500 blk-flr0-tel1-rck1-pnl-2-por1 ✓ TIA - Cat 6A Channel 4 3.5
3 Copper Wx4500 blk-flr0-tel1-rck2-pnl-0-por1 ✗ TIA - Cat 6A Channel 4 3.5
4 Copper Wx4500 blk-flr0-tel1-rck2-pnl-2-por1 ✓ TIA - Cat 6A Channel 84 3.4
5 Copper Wx4500 PR.BL#A.A.X.Z.A ✓ TIA - Cat 6A Channel 1.9 13.4
6 Copper Wx4500 PRBL#A.A.Y.Z.A ✓ TIA - Cat 6A Channel 1.9 14.7
7 Copper Wx4500 PRBL#A.A.Z.Z.A ✓ TIA - Cat 6A Channel 2 12.4
8 Copper Wx4500 A-2 ✓ TIA - Cat 6A Channel 2 15.7
9 Copper Wx4500 A-1 ✓ TIA - Cat 6A Channel 2 14.6
10 Copper Wx4500 A-3 ✓ TIA - Cat 6A Channel 2 11.8
11 Copper Wx4500 None ✓ TIA - Cat 6A Channel 2 14.0
Summary
Local Ser. No. pw20100003
Remote Ser. No.
Cable Manufacturer Generic UTP
Cable Name CAT 6A UTP
Cable Type UTP
Connector Manufacturer Un-Shielded Connector
Connector Name UTP Mod Jack 6A
Connector Type UnShielded
Limit TIA - Cat 6A Channel
blk-flr0-tel1-rck1-pnl-0-por1
Overall Result
Measurement Value/Margin
Length (m) 84
Delay (ns) 428.0
Cable NVP (%) 68
Resistance (Ohms) 15.1
Insertion Loss (dB) 0.6
Return Loss (dB) 7.9
NEXT (dB) 3.2
PSNEXT (dB) 5.7
ACRF (dB) 15.2
PSACRF (dB) 16.5
Total Records: 14 Selected Record No.: 1
Connected

Refer *User Manual – eXport* for more information on how to use the software.

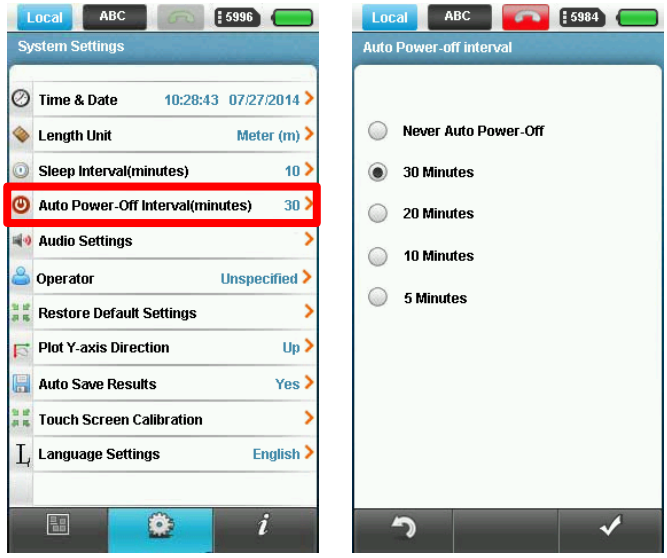
How do I change the Sleep mode setting?

Press the SETUP button > System Settings > Sleep Interval (minutes) to select the idle duration before WireXpert enters the sleep (power saving) mode.



How do I change the Auto Power-off time setting?

Press the SETUP button > System Settings > Auto Power-Off Interval (minutes) to select the idle duration before WireXpert performs an automatic shutdown.

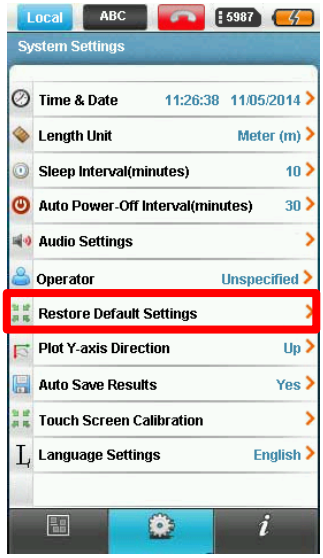


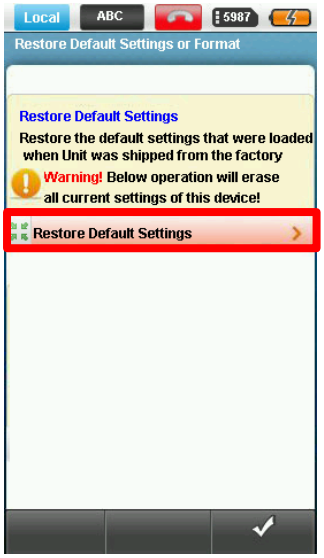
How do I restore my WireXpert to default settings?

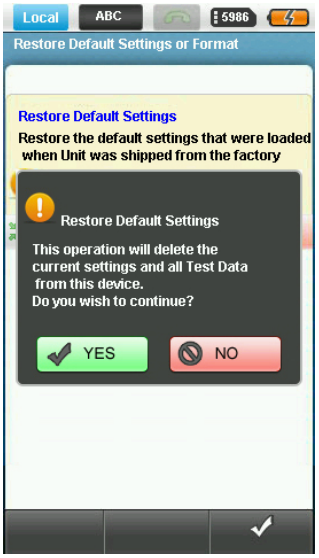
Press the SETUP button > System Settings > Restore Default Settings to restore WireXpert to factory settings. Click “YES” to begin restoration.

CAUTION

Restoring WireXpert to default settings is an irreversible action. All user defined settings and stored restores will be erased and **cannot be** recovered.



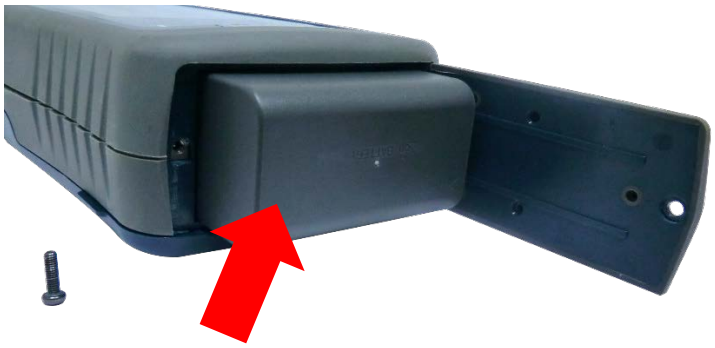

Local
ABC
5987
Restore Default Settings or Format
Restore Default Settings
Restore the default settings that were loaded when Unit was shipped from the factory
Warning! Below operation will erase all current settings of this device!
Restore Default Settings


Local
ABC
5986
Restore Default Settings or Format
Restore Default Settings
Restore the default settings that were loaded when Unit was shipped from the factory
Restore Default Settings
This operation will delete the current settings and all Test Data from this device.
Do you wish to continue?
YES
NO

How do I replace an old battery?

The batteries are located and secured at the bottom of the WireXpert units for safety reasons. To remove the batteries;

1. Switch off WireXpert and disconnect external power supplies.
2. Unscrew the battery compartment and remove the cover.
3. Remove and replace a new battery into the compartment.
4. Close, fasten and secure the screw onto the compartment cover.



Technical Support

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Psiber Data's global presence ensures our customers receives sales and technical support anywhere around the world.

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